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## Clover and other Grasses for Hay.

Many farmers entertain a strong prejudice against clover hay, especially for horses, believing that when fed to them for any considerable length of time it produces cough, and tends to heaves, &c. We presume the prejudice alluded to, among a portion of our farmers and others, is co-extensive with our country, or at least as far and wide as red clover is grown, and horses are kept and stabled; for in August, 1852, Mr. Ewbank, then Commissioner of Patents, issued printed circulars to almost every section of the Union, propounding a series of questions on rural matters. One of those questions, was: "Does your experience show that red clover is injurious to horses." By refering to the 'Patent Office Report' for 1852-3, we find some twenty-five or more responses to the above query. These answers were from a great number of different States, and as was to have been expected, the several respondents or writers, differed much in their opinions in regard to the good or bad qualities of red clover hay as feed for horses; but a large majority of the responses to Mr. Ewbank's question, were in favor of clover hay as a dry forage for horses, providing it is cut at the right time, and properly cured and housed.

For many years we have kept horses almost exclusively on clover hay through our long winters, and if the clover was cut when about one-half the blossoms had turned brown, and the hay mostly cured in the cock in good weather, so as to retain most of its leaves and heads, and green appearance, we have never known it to produce either cough or heaves. We know of no reason why it should produce a cough in horses, any more than red top or herds grass.

Clover when cut early for hay, as it generally should be, from its succulence, if not well dried before being carrried to the barn in large quantities, is very liable to *heat* in the mow, or on the scaffold; this process produces some injurious chemical changes in the hay. The starch, sugar, gum, &c., first assume the vinous fermentation, producing a saccharine quality in the hay. If the change here be arrested, no bad results would follow, the nutritive and healthy quality of the hay would not be lessened—but generally the vinous runs into the acetous fermentation—this is followed by sourness, mouldiness, and dust. Such musty hay, when fed to horses, when made from clover or any other kind of grasses, would be very likely to produce a stubborn cough, frequently ending in the heaves. It is no wonder that *some* farmers have a prejudice against such clover hay. What would be the value of the medicinal herbs annually garnered up, (while in blossom) by the careful housewife, if suffered to heat and ferment, as is often the case with clover hay?

In making hay from clover, we have for many years practised the following method: In good bright weather, commence mowing as soon as the dew is off; let it remain in the swath till three or four o'clock, afternoon, then with the fork take the swaths up in flakes, and put up cocks that will average about 50 lbs. of dried hay. The cocks remain untouched for twenty-four hours, then they are carefully pitched over in flakes, and two cocks are put in one; from nine to ten o'clock the third day they are opened, and if the weather has been fair the hay will be in good order to get in after dinner, without any liability to heat. Though we generally sprinkle a few quarts of salt to each load as stowed away. This is as short a time as clover can be made by cutting, spreading, turning, raking open, &c., as is practised by many farmers. By the above processes, most of the leaves and heads are left in the field, while by making mostly in the cock, the leaves and heads are principally retained, and the whole mass retains its color and its clover odor, and horses, cattle, and sheep eat it with avidity. It is true we cannot always be sure of three good hay days in succession, and in case of rain, "hay caps" come into profitable use, not only in protecting clover, but other kinds of hay.

In regard to the proper time for cutting grass for hay, farmers differ widely in their views, and we have read almost angry discussions in some of the agricultural papers upon this question—some advocating the cutting of the grass when in blossom; others, when the seed was fully in the milk; while others contend as stoutly, that the seeds of herds and other grasses should be fully matured before cutting them for hay. Without attempting to decide this question, and many similar ones, we have generally thought it about as safe to take a middle course between extremes. However, there seem to be many reasons why grass should be cut for hay before the seeds are fully ripened, and there

are good reasons why it should not be cut too early in its growth.

With the present scarcity and high price of labor in many sections of the country, we would recommend to farmers to commence haying as early as their first ripening grasses will do to cut, and to follow up the business of haying as fast as circumstances will allow, believing there is more grass mown too late, rather than too early in the season.

Very much may sometimes be saved to the farmer in having a supply of stout cotton cloth hay caps on hand; there is no theory about this, it is simply matter of fact, to which "we are clear to g'ie our aith." They are not only useful in protecting hay from rain, but are also very convenient for *capping* stooks of grain in the field, and field beans, where they are stooked in the field. They are easily put on the stooks when there is an appearance of rain, and as easily removed in fair weather—their removal gives the sun and air a chance to very much expedite the drying process.

## Quantity and Value of the Manure of Cattle.

Since the publication of our article on this subject (Co. Gent. of March 5th, and Cult. of April,), we have found the following remarks in the report of a recent discussion at a meeting of the London Farmers' Club, England. The gentleman who opened the discussion, Mr. Baker, is reported to have said that he had found, on investigation, that a cow feeding on 100 lbs. of grass gave 71 lbs. of solid and liquid deposit. An ox would produce 1¼ cwt. while feeding on turnips or mangold wurtzel with 24 to 28 lbs. of straw daily; or, in all, about 150 lbs. of solid and liquid manure would be produced by an ox daily. (This, we presume, is true only of an ox of very large size, and weighing about 2000 lbs.) An ox, if kept feeding continually on turnips, grain, and hay, in the ordinary mode, would produce in the seven months of winter about twelve tons of manure; and if foddered in summer about seven tons more. Thus a large ox would produce, altogether, about 19 tons in the yard. In feeding in boxes an ox of average weight, it was said, would produce about 11 cubic yards of manure in four months, or 33 cubic yards if kept constantly in a box for the whole year.

In reference to the value of manures from farm stock, it was remarked that that from horses was much superior to that from oxen, and that from oxen superior to that from cows, and that from old or full-grown animals far superior to that from young animals. A cow in feeding extracts a larger quantity of the nutritive qualities of food than an ox, because food passes more rapidly into the form of milk than that of muscle or flesh and fat. Again, nearly all the food consumed by full-grown animals goes to supply the natural waste of the system, whereas much of that consumed by younger ones is absorbed in the formation of additions to the bones, flesh and fat, and this is the reason why the richest manure is produced by animals already fat and full-grown.

In the feeding of horses it has been found, said Mr. Baker, that this animal produced in solid and liquid deposits taken together three-fourths in weight of what it ate and drank. A well-fed horse would give 9½ tons of solid and liquid manure per annum; and if to this were added about 2½ tons of straw or other litter, the whole amount made by a horse in a stable in the course of a year might be estimated at 12 tons.

In our former paper the two following results were obtained from collating a variety of observations made by different individuals: 1. That an average sized cow, or one fed chiefly on hay and allowed water freely, will make about two and a half pounds of solid manure for each pound of hay, or its equivalent consumed, or, allowing one-fifth for difference between it and in the usual state of dryness, about two pounds for each pound of hay consumed. 2. That the value of the manure made by a medium sized cow in the course of a year would be, according to the usual modes of estimating ammonia, potash and phosphoric acid, equal to between $20 and $23, or a little over $10 in the course of the six months of winter.

A comparison of the somewhat loose estimates which we have quoted, with the results which we obtained as to *quantity*, from collating several observations of the highest degree of accuracy and reliability, will furnish additional grounds of confidence in the conclusions at which we arrived. In making any estimates based on these conclusions as to the *quantity* of manure made by animals fed in stables or at distilleries during the winter, it should be recollected that our conclusions refer to medium sized animals, cows or cattle rather under than over the weight of 1,000 lbs. If the application is to be made to the case of large oxen, from 1,400 to 2,000 lbs., a corresponding allowance must be made according to the gross weight and the greater quantity of food consumed.

As it may seem to many that the estimate given in our former article, as to the *value* of the total deposits, solid and liquid, of a medium sized cow or ox during the course of a year, must be too high, we wish to remind such of the fact, that according to the usual modes of managing manure, far more than half its value is dissipated by exposure to rain, sun and wind, while the liquid portion is seldom saved at all. As manures are usually managed, there is little wonder that some should think them hardly worth hauling and spreading. The virtue has gone out of them.

Then, again, it should be remembered in estimating the value of manures that much, very much, depends on the nature of the food consumed. The more nitrogen there is in the food the more ammonia will there be in the manure. A cow or ox fed on straw, poor hay, and no grain, will yield manure of much less value than one fed on richer food, with oil-cake, &c.

BONES PARTIALLY DISSOLVED BY FERMENTATION.—With reference to the plan of hastening the process of decomposition in bone-dust or ground bones, by forming quantities into heaps and fermenting them by the addition of water, diluted urine, or drainings from a manure heap, which will be found mentioned in an article on Old Pastures in this week's issue, we find the following remarks in an English paper:—"There are those who prefer from economy, the fermenting of bones without any application of acid. The late Mr. PUSEY, (President of the Roy. Ag. Society of England,) was an advocate for this, and published experiments showing that fermented bones were invariably *cheaper* than manufactured superphosphates." This authority in favor of fermented bones is so high, and the practice of thus preparing ground bones for use is becoming so extended in Great Britain, as to render it desirable that the plan of thus facilitating their decomposition in the soil should be tried in this country, and the results reported. Compared with a good superphosphate, containing, as the average of fifty-eight superphosphates analysed by the chemist of the Highland and Ag. Society of Scotland, in 1856, shows that a good one should contain, at least over 17 per cent. of *soluble* phosphates, 16.93 being the average found as above;—compared with *such* a superphosphate fermented bones will not produce so manifest an effect during the first year, but the fertilizing influence will last much longer, which is more desirable in the case of permanent pastures than a more rapid though less lasting operation.

☞ Mr. Flint, in his Report of the Agriculture of Massachusetts, says that the value of the grass crop of the United States, for pasturage and hay together, is not less than three hundred millions of dollars.—*Ex.*

## Pull your Winter Cress.

"Rid, now, your fields of one year's seeding,
And save the toil of seven years weeding."—EDWARDS.

Winter cress is one of the most noxious weeds that ever infested the farm since the expulsion of our first parents from the Garden of Eden. Flourishing equally well on both dry and wet soils, and maturing and fructifying so very early in the season, even before the clover is ready to cut—being a biennial plant, and almost as tenacious of life as the live-forever; getting such a firm hold in the soil in the fall, that the freezing and thawing of the most severe winters does not injure it. It is more to be dreaded than the Canada thistle, (*Circus arvensis,*) or pigeon weed, (*Lithospernum,*) or the very noxious hedge mustard, (*Officinal sisymbrium.*)

Its seed is very difficult to separate from clover seed, timothy seed and all other kinds of grass seed; and it will vegetate where every thing else would not even try to grow. The seed is a small, black, round seed, and after it has lain in the ground where it could not vegetate, for a century for aught that I know, after being turned up by the plow to the enlivening influences of vegetable life, will very soon hold undisputed sway in any field, either rich or poor soil. Canada thistles are little to be dreaded when compared with it—because if we enrich our soils as they ought to be, and bring them to as high a state of cultivation as is most profitable, Canada thistles will soon be a weed to be spoken of only as a thing that *was*, but is not; while the *winter cress* will flourish like willows by the water courses, and effectually root out all grass and grain within its reach.

Its botanical name is, according to Dr. Darlington's Ag. Botany, *Early Barbarea.* The lower leaves are lyrate, the terminal lobe obovate or rounded, coarsely sinuate dentate; upper leaves pinnatified with entire linear-oblong segments; siliques linear, elongated, compressed ancipital; style thick and very short.

*Root*—biennial, (or seed vegetates one season and fructifies the next.) *Stem*—nine to thirty inches high, (according to the fertility of the soil,) somewhat branching. *Leaves*—smooth, lower ones three or four inches long. *Petals*—yellow. *Siliques* (or pods containing the seed) long and slender.

Many farmers mistake this for hedge mustard or what some call *wild* mustard—some call it scurvy grass. But he who has no smattering at all of botany, can readily perceive by comparing the two, that they are very different weeds. Mustard is an annual plant; it springs from the seed and fructifies in a few months; if it vegetates in the fall the winter kills it. The petals, (i. e. the flowers,) are of a little different shade of color. The leaves of the winter cress are smooth, while those of mustard are rather rough and hairy. Mustard seldom appears in good grass ground, while the winter cress grows any where. By plowing it under and covering it well, it will die. But if a few stems are left uncovered between the furrows, the growth will be checked but little. If cut off with the scythe it will soon send up new shoots, which will go to seed before the crop is ready to harvest. The true way is *to pull it* and shake off the dirt, and then throw it in heaps. If pulled and thrown again on the ground in wet cloudy weather, the roots will often get hold again on the ground, and the plant revive again.

*Now is the time to pull it.* In June, while the grass and crops are yet small, before it fructifies. If a field where it grows seems like a flower garden, let all the forces of the farm be rallied, both old and young, male and female, if it is necessary; it pulls easy, and one will be surprised to see how much can be pulled in a half day. I have but little on my farm, and that I purchased among clover seed. But I would no sooner let any of it go to seed, than I would the baneful Upas to grow on my farm.

Our mutual friend, David Crocker, Esq., showed me a large field yesterday, where he spent last season in pulling it, *eleven days*, and now one hand would pull it all in two hours.

Should any of it escape notice until it has gone to seed, all other business should be suspended, and every stem and pod burned. It is folly to throw it in the running stream, or in the beaten track of the highway; for birds will carry it, or it will find a place to vegetate on some one's soil. Let it be kept from seeding, and it will soon give us but little trouble. S. EDWARDS TODD. *Tompkins Co., N. Y.*

## To Save Clover Hay.

I adopt the following plan with perfect success. The system of allowing clover to become hay in the field I think an injudicious one, as by it you lose three parts of it and that the best, namely: the leaves, as they, when dried, become dust. I am now feeding mules and oxen with clover cut last June, and saved in the following manner:

I usually cut clover when the lower part of the flower begins to blossom. What I cut on one day I let remain in the swath until the next. I then turn it over, shaking as little as possible, and let it remain so for a couple of hours, when I commence to load. where we first commenced to turn, loading out of the swath. I then put it into stacks as follows: Lay some rails at the bottom, three rails lengthwise, one at each end, and one in the centre; on them a layer of straw a foot thick; on that a layer of clover three feet thick, sprinkling it with coarse salt, and so continue to the top. Oat straw is preferable to rye or wheat, as it absorbs the moisture from the clover quicker than the others, and is eaten better by cattle. The clover will heat, but the straw absorbs all the moisture and becomes clover tasted, and is eaten as well by the cattle as the clover itself. I have put in one stack in this manner the yield of thirty acres, second year's growth from the seed, and I find the larger the stack is the better it keeps.

When your stack is finished, let it be roped with hay ropes, and as the stack keeps settling let them be tightened, as this prevents the stack settling too much on one side, which it will do if this is not attended to regularly. I let it stand in this way until the middle of August, by which time it has become settled.

I then thatch it with coarse grass, sedge, or straw. If these materials are dry, sprinkle them with water, as it makes them more pliable, and then tie them in bundles. Take one end and turn it down; it will then look like your clenched hand, tapering as to your wrist, leaving the material of what even length it may be. You then commence at top of your stack, and put on a straw cap, fastened with pegs. These bundles are next inserted. Put the head into the stack, going down one side of the stack first five or six feet, and as far out on either side as can be reached; then shift the ladder to one side, and take the part where the ladder stood. If there should be any hollows in your stack, they should be filled up at this time, which is easily done as you proceed, and if not attended to, your stack will leak and rot your hay. I generally thatch the north side of the stack down to the eve, as it stands to the last. When I commence to cut, I do so on the south side, commencing so far up as the layers will come off when cut about five or six feet wide, leaving off at a layer of straw. This straw will protect the clover from the weather until next cutting. Cut with a hay knife.

You must not mind if you see your stack of clover hay (which you will) smoking like a chimney. It is

all the better for it, and won't burn. I have never had a stack burn, or any of the clover *rot*. I have been frequently asked, when putting clover up in this manner, if I were going to make a large heap of manure with the clover; but when I come to cut in winter, they said it looked like cheese, and that they could not believe it, if they had not seen it put up themselves. GERALD HOWATT. *Sussex Co., N. J.*

### Why Don't the Corn Grow?

MESSRS. TUCKER & SON—We are in trouble in this section of the country, and there is no relief for us this season, as I can see. Disappointments are the lot of all men, and we (I would say farmers) generally are the sufferers at present. After a severe winter we hoped for a pleasant spring and summer, but such has not been the case here. Our spring crops look tolerable, but I cannot say so of the corn crop.

It was late in the season when corn was planted. At planting time we had a few days of genial weather, which was improved in planting our corn. In due time many looked for its coming up, but found it had rotted, and set themselves to planting over again with no better success, and even yesterday one of my neighbors came to me to get some King Phillip to try a third time.

I would now ask what is the cause of all this. Is it in the season or in the seed? I took some precaution with my seed, which I raised myself. I sprouted it before planting, and found I could get only 3 sprouts from 7 kernels if hurt on the cob? *Why these three sprouts?* It was sprouted in doors, and the cold could have no effect. These three out of seven were of the small 12 rowed kind. The large 8 rowed was a perfect failure. King Phillip did well in the house, and I believe all sprouted. The three kinds mentioned were all selected in husking time, and all kept in one place during winter. I have since planted some King Phillip and have examined the hills, and I find that some are sprouted and coming up, while others are rotted and will never come. Here is a mystery which I hope you or some of your subscribers will solve. I would say further, that some of my neighbors obtained seed where I did; mine has all come, while theirs are almost a failure. Why is this, and what is the cause? We have had only two days of dry weather in as many weeks past; it is raining now, and but little hope of warm weather at present.

I hope you will urge a discussion of the subject through the columns of your papers, so that farmers may be be benefitted and prepared in time to retrieve their loss another season. JAMES WALLACE. *Cayuga Co.*

### Smut upon the Onion.

MESSRS. EDITORS—A serious obstacle has lately come in the way of the culture of the onion, in the form of *smut* or *rust* upon the young plant, shortly after it starts from the ground. I have seen this substance to the extent of an *eighth or quarter of an inch*, in the crotch where the leaf branches from the stock, and wherever it appears the plant surely dies. I learn from experienced cultivators, that it is found more extensively on grounds where onions have been grown for several years, and that the ravages of this variety of blight are more extensive the present than any former year. I have seen half acres together, where the proprietor thought it necessary to plant the ground anew with carrots, or corn, or some other crop, having given up all hope of the maturity of the onion.

This was where guano had been used as the chief fertilizer upon the ground, but whether it *destroyed* where it fertilized, I cannot say. I should be very sorry to believe that it did, for we had hoped much from guano. Please call the attention of careful cultivators to this subject. J. W. PROCTOR. *South Danvers, Mass.*

### Pie Plant and Strawberries.

MESSRS. EDITORS.—I would inquire through your columns about the Pie Plant, or Rhubarb: which is the best kind, the largest, and most prolific; also, the treatment of it, soil, manure, &c., when the best time to set out, and how long to remain in the earth before taking them up and separating? When is the best time to set strawberries, how set them, in hills or rows? what manure is best adapted to them? Answers to these questions would, I have no doubt, be acceptable to many in this State, and also oblige A SUBSCRIBER. *Biddeford, Me., May*, 1857.

Many new varieties of the Pie Plant are constantly springing into existence, every plant from seed varying more or less from the parent. The Tobolsk is an early, red variety; the Giant is a large, later, green variety; these are the two leading old sorts. There are many newer and more approved, among which Downing's Colossal is highly esteemed for its excellence, and Cahoon's for its great size. There are now many others, of high merit, under experiment. Our correspondent should however observe, that there is less difference in the inherent tendency to large growth than many suppose, great size depending on the depth, richness, and cultivation of the soil—or as we have heard a skillful gardener remark, "tell me how much manure and deep digging you have given your plants, and I will tell you whether you have the large kind or not."

When Pie Plant is raised from seed, it should be planted very early in spring, and as the seed is about a month in coming up, a few radish seed should be mixed with them, to mark the row, and show where to hoe. The radishes will be large enough to use before the rhubarb has attained much size. It will require three years for the seedling pie plants to be ready to use. Although seedling plants will vary in character, yet from fine sorts all will be good. To preserve the exact identity of any variety, the roots must be divided in autumn by cutting each eye separately, and planting out about two inches below the surface, protecting them through winter by a few inches of leaves. The second year they will do to use. They may be divided about every three years, the time varying however with the richness of cultivation. The size will depend much on their having plenty of room—which should not be less than two feet in the row, and the rows four feet apart.

The best time to set out strawberries is early in spring—next best, during the half dormant season immediately following the fruiting. Either "hills" or rows will do. The best manure is a well rotted compost in which there is a large share of vegetable mould—but its amount and character must vary with the previous condition of the soil

COMPOST HEAPS.—A heavy task at cartage may be saved in making all compost heaps consisting of turf, loam, or muck in alternate layers with the manure, by avoiding the practice of making those heaps in the barn-yards, requiring carting the loam or turf from a distance, and adopting instead the practice of placing them as near the land where the compost is to be applied as practicable. If these ingredients can be had at the same place a double cartage may be saved. Such heaps may be now made, to great advantage, and furnish an excellent manure for autumn application.

### Care of Tools.

Every farmer and gardener should remember that tools are more rapidly injured by exposure in summer than at other seasons of the year. The hot sun cracks them, opens crevices in the wood, which the dew and rain fill, and thus decay goes on rapidly, while they are warped, distorted, and weakened.

There are two remedies, which must be jointly applied to prevent the great loss which many farmers suffer by this exposure of tools.

1. Make a list of all tools, implements, carts, &c., and write it largely and plainly on a large sheet of stiff pasteboard, or on a painted board prepared for this purpose. One column may be for hoes, spades, iron rakes, and other of the smaller iron tools. Another may embrace hay-rakes, scythes, ladders, &c. A third may include chains, crowbars, &c. A fourth, plows, harrows, scrapers, and barrows. A fifth, carts, reapers, drills and other larger machines.

2. Every day at evening, as regularly as the cows are milked and supper eaten, run over this list and see what tools have been used that day, and see that all are in their places. Once a week examine every one more particularly, and see that it is in good condition, and put away bright and clean, and not coated and clogged with dirt. Unless this regular review is made and all workmen are made responsible for the tools they use, and understand that it is expected of them to house their tools every night, many will be injured by exposure, at a loss far greater than all this trouble; many will ultimately be lost; and lastly, and by far the greatest evil, will be the hours expended in hunting for those which have been misplaced, with work hurrying, men standing idle, and teams delayed, in anxious and vexatious searches—while every one will earnestly protest that *he* "did'nt have it *last*," and "never lost any thing."

"Why, I expected to use it again in the morning and I didn't think it worth while to bring it in just for one night." But it rained the next day, and the field was too wet to work again that week, and the next week this man was absent on the day it was wanted, and no one else knew where to find it, and we were all delayed over an hour hunting for it, which threw several other jobs out of time and order—while the time occupied in bringing in the tool would not have been two minutes.

Many farmers have expended more than five hundred dollars on the different implements they use; and they are broken, decayed, or worn out in one-fourth the time they would last if properly cared for—that is, four hundred out of the five hundred are sunk by carelessness. A single day of warping in the sun does not injure them "*much*," it is true; and a single nights' exposure to rain or heavy dew, in filling up the cracks the sun has made, may be an equally small damage; but a repetition day after day, week after week, and year after year, rapidly loosens the joints, and deepens the decay, until some extra strain upon them gives the finishing stroke.

Keeping tools *well painted*, will make much difference in their durability on the long run. The paint should be of a light color, so as not to heat in the sun's rays. Those parts, as for instance the fellies of wagons and cart wheels, which are much exposed to moisture, should be the more frequently painted. A vessel of prepared paint, (with a closely fitting lid, to prevent evaporation,) should always be on hand, to be used in painting tools on rainy days.

The coarser tools, &c., such as harrows, hay-rakes, &c, will be benefitted nearly as much by frequent *whitewashing with lime*, as by painting. Apply the lime wash when they are well dried, so that the pores may absorb the lime freely, and the greatest benefit will result. The white color, preventing heating in the sun, will be a material advantage. An experienced painter has given it as his opinion that whitewashing the coarser articles of the farm, and doing it as often as once a year, will be quite as beneficial as coating with oil paint, while it will be many times cheaper.

### Transplanting Strawberries in Summer.

In reply to inquiries for the best mode of transplanting strawberries in summer, we furnish a few brief hints.

The best time is always early in spring, as, at that time, we have only to set out the plants with ordinary care, for all to grow. They will bear abundantly the second season, and if kept clean and cultivated, for two or three years afterwards. If allowed to run the season of transplanting, and not cultivated except in the early part of the season, they will give a full crop the next year, but not afterwards. Some good cultivators think it best and most economical of labor to plant a new bed every year, and to let the bed run full of plants, for only one year's bearing. They find it easier to plant out a new bed in spring, than to cultivate the old one through the season. The crop is not, however, so fine, when thus treated.

Transplanted immediately after bearing, and while the plants are somewhat exhausted and consequently in a partially dormant state, strawberries will do well, and afford as good a crop next season, as by spring transplanting, but more care and labor are required. The ground is first to be prepared by properly enriching it, and making it clean and mellow. The amount of manuring must depend greatly on the previous character and condition of the soil. If naturally fertile, and if it has been well previously manured, little need be applied; if not largely composed of vegetable matter, a quantity of leaf mould or well prepared peat will be found very useful. Where much manure is needed, a compost with a large proportion of such vegetable matter is always best.

The plants should be selected from the youngest well rooted runners of the previous year. They should be lifted out with a spade, and the earth shaken off, and not *pulled out*, as is often done to the injury of the roots. All the fully expanded leaves are to be clipped off, leaving only the small, half-open ones. The roots are then to be dipped in mud made in a pan or pail for this purpose, thick enough to leave a coating on them about the fourth of an inch. They are then to be transplanted, spreading out the fibres as much as may be convenient, and taking care not to cover the crown. If the soil be dry, they should all be watered heavily, and an inch of mellow earth drawn over the watered surface, to fill up the settled earth. A mulching is then to be applied about an inch or an inch and a half thick, of fine, partly decayed stable manure. This will prevent the surface from drying and becoming hard and crusted; and if watering should afterwards be necessary, which however can only happen in extremely dry weather, this mulch will keep the surface moist and in proper condition. Treated in this manner, all or nearly all the plants will live, and furnish an abundant crop next year.

☞ The June exhibitions of the Washington (D. C.) and Brooklyn Horticultural Societies, appear to have been successful and well attended. We find nothing in the published reports to call for particular notice.

## Hints from the Horticulturist.

The last number of the Horticulturist contains many valuable practical hints, which we glean and present in a condensed form to our readers.

HARDINESS OF THE NEWER RASPBERRIES AND BLACKBERRIES.—Charles Betts, of St. Joseph's Co., Michigan, gives the following results of the past severe winter in that region:—*New Rochelle Blackberry* requires protection. The *Hudson River Antwerp Raspberry* had about one-third of its last year's shoots killed; *Brinckle's Orange*, "not much hurt;" *Col. Wilder* and *Knevett's Giant*, only the tips injured; *Vice President*, killed more than halfway down; *Cushing*, killed down to snow line. The *Thunderer*, nearly as hardy as the common *Blackcap*. [We may add, that even hardy sorts bear earlier and better by being protected, the cold retarding growth the following Spring, even if it does not kill—we have known a hardy tree kept back from expanding its leaves for *three months* by the intensely cold weather of 1854-5, and afterwards grew finely.]

TAN FOR MULCHING STRAWBERRIES, has been highly recommended, but from the editor's experience appears to be very uncertain, either from its varying condition or other causes. He remarks, "we have known it utterly to kill the plants, and in other cases to benefit them remarkably."

GLASS LABELS, for sticking into the soil to mark plants, have been introduced in England, price sixpence per dozen. They are over an inch wide, nearly a quarter of an inch thick, and six inches long. The name is written on with diamond, and is very visible when seen against the black soil below. They are neat in appearance, and of course do not decay.

ROSES.—A late work gives the annexed list of Hybrid Perpetual Roses: "The following are the best Hybrid Perpetual Roses in the greatest number of instances: Géant des Battailles, Baronne Prevost, Duchess of Sutherland, Mrs. Elliott and LaReine, (two uncertain kinds, however.) William Griffiths, Madame Laffay, and Madame Rivers, Pious IX. and Robin Hood, Général Jacqueminot, for brilliancy, and Dr. Marx, or Robin Hood, or Augustie Mie, or Baronne Hallez; but after the first six or eight, there are a dozen of about equal merit."

NEW FRUITS.—The committee of the Mass. Hort Society, consider the *Rebecca* grape as superior to the *Diana*. The *Jenny Lind* strawberry took the $50 plate, and Sir Harry, Admiral Dundas, and Sir Charles Napier are regarded as among the best newly introduced sorts. *Knevett's Giant* and *Brinckle's Orange* raspberries are specially approved. The following American pears are commended:—Sheldon, Lawrence, Brandywine, Boston, Seckel, Tyson, Andrews, Lodge, Kingsessing, Howell, Oswego Beurré, and Adams.

WESTERN POMOLOGY.—A Kentucky correspondent says, "we want a western pomologist—all the works now written, so far as I know, are by *eastern* men, who are *wholly unacquainted* with our fruits." What will such men as P. BARRY, CHARLES DOWNING, and others say to this, who have seen all the best collections at the western pomological exhibitions, as far west as Iowa,—who have had large collections of western fruits sent them; and who have fruited at the east some of these same "unknown" sorts, ten or fifteen years ago, before they were scarcely known even to western men themselves?

SOUTHERN FRUITS.—A southern correspondent states that peaches grow so luxuriantly that even in Southern cities the call for them is very limited. Yet he states that one cultivator realized $5,000 by shipping peaches to New-York market. A little enterprise might make this a large and profitable business, as the Early Tillotson, one of the very best early peaches in the south, ripens there about the time of our earliest cherries and strawberries. The Morello is the only cherry that succeeds well there. The Bigarreaus and Dukes bear blossoms abundantly, but the fruit never sets. The curculio is abundant—salt, chickens, swine, and other remedies fail—jarring down on sheets is the only remedy that succeeds, and that is impracticable on a large scale.

## Overhanging Fruit.

The papers are discussing variously the right of a landowner to the fruit which hangs across the line into his neighbor's garden. It appears that lawyers have given different opinions, according to the fact whether they themselves own on the one side or the other. We know but little of law, but equity is very clear on the subject.

A. has no right to turn animals into his own field, that will leap a good fence, or burrow under it, into B.'s land—this is self-evident with every person. On the same principle, he has no right to plant and nourish a patch of Canada thistles near the line, the roots of which will push under the fence and spread through B.'s fields, or the seeds of which will be scattered over the fence. Now, if A. plants a line of fruit trees along B.'s boundary, one-half the roots extend into B.'s soil, and one-half the branches shade B.'s surface. Has A. any better right, thus to burrow under the fence, and to throw branches across the top, than he has to place animals in his field that will pass under and over a good line fence? There can be but one answer to this question.

But B. has not an equal right to all the fruit on his side of the fence, for he incurred no expense in planting the trees. B. cannot therefore claim the fruit; but he may claim an amount of damages equal to the annual value of land occupied and shaded—which may be paid in fruit or in such other way as A. and B. can agree between themselves, or which may be decided by a third party acting for them.

## Horticultural Items.

THE SALAD GROUND NEAR ERFURT, in Germany, said to be wholly planted with water cresses (Nasturtium officinale) has yielded an annual profit of $60,000.

BURNING OF THE FOLIAGE, in vineries is caused in most cases by the roof being far to flat. With ordinary care, it is next to impossible to burn the leaves of the grape vine, if the house is at an angle of not less than 45°. E. S.

THE FAMOUS PEACH TREE of Chatsworth, occupying a glass house by itself, and extending over a trellis of a hundred feet long, bore, in the year 1850, 926 perfect fruit, 7801 having been removed in process of thinning. The sort is the old Royal George. A J D.

HIGH PRICES.—$300 has been paid near London for an acre of cabbage; $500 for the same of Rhubarb, $700 for white coss lettuce, and $750 for an acre of strawberries. JAMES CASHILL.

VENERABLE ORANGE TREE.—There is an orange tree still living and vigorous, in the orangery of Versailles, which is well ascertained to be above 400 years old. It

is designated the Bourbon, having belonged to the celebrated constable of that name in the beginning of the 16th century, and been confiscated to the crown in 1522, at which time it was 100 years old.

A crown is placed on the box in which it is planted, with this inscription—"Sown in 1421."—*Extract from a journal of* 1828.

IMMENSE GRAPEVINE.—There is, or was, an enormous grapevine, of the wild native species, growing at West Hill Farm, two miles from Burlington, N. J., which, at three feet from the ground, measured *six feet one inch round*, and at ten feet, had a circumference of three feet. It runs over and covers four trees, one a full sized white oak.

A LITTLE DILUTE LIQUID AMMONIA, says the Scientific American, poured upon a hot iron plate in a green-house, has a wonderful effect in developing flowers and leaves.

## Improved Breeds and High Prices.

MESSRS. EDITORS—Allow me a few remarks in reply to J. W. L., in your 230th number, upon the value of "improved stock." There is no question but that any peculiar qualities may be propagated and even magnified in successive generations by judicious breeding, and that "native" cows may be made good milkers. But in the rejection of "improved breeds," your correspondent simply proposes to begin anew in the direction of accomplishment, that which has already been done, and which a single life-time is not able to affect. What are "*native*" breeds, but breeds once "*imported?*" What should we think of a man in England who should prefer the small Welsh sheep of the mountains, or the coarse heath sheep, to the Bakewells or the Southdowns,—upon the principle of improving for himself and putting down exorbitant prices? The reasons against such folly are two: 1st. There is no proof that the Welsh sheep or the Black Heath could ever be made to rival the Bakewells or the Southdowns, one an "improved," and the other a *pure* breed. There is nothing analogous in recorded breeding. 2d. There is no prospect of any man in a single life-time attaining the end, if sought, and possible!

J. W. L. says, "fixity of type" may be obtained by "breeding in-and-in," and in no other way! Now we assert, without fear of successful contradiction, that fixity of type can neither be acquired nor maintained by "breeding in-and-in," but, on the contrary, it will surely be lost by such process.

The same laws, some allowance being of course made for moral influence, govern other animals, as man, in propagation and development. How has breeding "in-and-in" affected men? By producing disease, idiocy, blindness, diminution of size, and impotency. This article will not allow a full discussion of this subject, but I would say that "breeding in-and-in," that is breeding animals of near family blood with each other, has this effect: If judicious, it may make the bone finer, the form more symmetrical, and give greater tendency to fatten. But then you lose size, hardiness, health, and bring on, ultimately, *impotency*. The whole thing depends on the philosophical result of impotency, towards which point "breeding in-and-in" tends. Now castration tends to produce finer bone, more fat and plumpness, and consequently symmetry—than potency; but these points may be gained by other means, without any of the fatal and dangerous results of this great violation of nature's law. For in a state of nature, where promiscuous intercourse is allowed, its abuse is purged off by the fact that "in-and-in" bred animals, are soon driven off by the more vigorous and potent masters of remote crosses. The true basis of "fixity of type" is in *purity* of race, under judicious crosses of the same race or family.

A good race is always injured by connexion with an inferior race—the inferior race is always elevated or improved by the superior, which is always the loser!

Now, your correspondent admits that a cross of the Short-horn upon the native cow produces a "marked" effect; that is, an effect which the most judicious cross of the native upon the native has not and never can produce! What is this but giving up the whole argument in favor of the superior race?

The whole theory of improvement of vegetable and animal life depends upon increased facilities of development; that is, increase of *quality* and *quantity* of food, heat, light, air, &c.—all the vital elements. Now, an improved breed will, of course, be more rapidly deteriorated by an opposite direction of these forces than an unimproved one—upon the same principle that the born poor suffer poverty with a better grace than the rich made poor!

Now if any man proposes to feed on "oat chaff and cut corn-stalks," let him avoid all improved breeds of all pomestic animals. But if one intends to keep pace with the progress of the times, let him by all means avail himself of the experience and advancement of our race. The writer of this article has large experience in this attempt of improvement of breeds, and he at last rather reluctantly, but as decidedly, settled down into the maxim, "you can't make a silk purse out of a sow's ear."

J. W. L seems to think that the breeders of "improved cattle," I should say *pure*-blooded cattle, have been compelled to resort to new importations, because the breeds have run down in America. Such is not our experience in Kentucky; the latitude is as favorable to "Short-horns" as England. On the contrary, some of the best specimens of Short-horns are of the oldest importations; and our best judges declare nothing is to be gained, and much may be lost by a resort to England for new bloods!

No doubt the price of Short-horns is too high for small farmers, or "farmer's of small means," at $100 to $500 for a calf "six months old," but it is not true, as many intimate, that this is an artificial or fictitious price. Price may be inflated temporarily by chance, or interested parties: but there is nothing in the history of men which proves that a useless thing can, for any length of time, be kept up to high prices. This the Short-Horns have done for more than half a century; and now they bear higher prices than in the first furore of a *new* breed! These things do not happen without a cause. The rapid appreciation of this breed of cattle depends upon their intrinsic value, and the great law of demand above the supply, in consequence of the large area of new land opened up in America, during the last century, by men whose intelligence will not allow them to attempt the empiricism of making beef upon "oat chaff and cut corn stalks!"

Just so long as a Short-horned steer may be made to go into the New-York market weighing 1,800 or 2,000 lbs. gross, and bring 12 to 15 cents nett, whilst the "native" breed comes into the same market at five or seven years of age, weighing from nine to ten hundred pounds, and selling for eight or ten cents a pound, or figures approximating these: $100 or $500 will be given, if not by one, by many farmers of small means, for "a calf not six months old!"

In my country, now, a native calf at weaning time would be dull at $5; a grade calf of the Short-Horns brisk at $15. Here, then, is an every-day practical difference (good feeders won't take the "natives" at any price,) of ten dollars on the head at weaning time. How long will it then take to pay for a bull at even the extreme figure of $500?

No doubt many Short-horns are sold at fancy prices: the wealthy will indulge their tastes at whatever cost; but instances of that kind are rare. Master Butterfly lately went to Australia at $6,000. Now I am not prepared to say that the owners gave too much, and

will not make money out of him, but this I will fearlessly say, that if the people of that new continent had but one chance of getting the Short-horned breed in all the world, it would not have been a hard bargain for them and their posterity to have given, instead of $6,000, $600,000 *for* a single animal! C. M. C. *Madison Co., Ky.*

### Chester County Hogs.

MESSRS. L. TUCKER & SON—Mr. GEO. FOLSOM of Zanesville, O., in your issue of June 4, asks some questions relative to our "Chester County hogs." I was in hopes that some one among your many readers in this county, better posted up in such matters than myself, would have furnished the desired information, but as Mr. F.'s queries remain unnoticed as yet, I have thought that perhaps a "poor answer would be better than none," and accordingly have hastily thrown together some of the leading traits and points of the Chester hog, as I find them established among the farmers of our county.

The Chester hog is the result of continued careful breeding and judicious crossing in this county, during the last thirty-five or forty years. The first impulse to this improvement, it is said, was the importation of a pair of handsome hogs from China, some forty years since, by a sea-captain then residing in this vicinity. Of late years, however, many of our breeders have been laboring to bring the Chester hog up to an acknowledged standard of excellence—to define its points, and make it as distinctive in character, and as easily recognized as a Berkshire or Suffolk. Their efforts, we think, have been successful.

The genuine Chester is a pure white, long body and square built, with small, fine bone, and will produce a greater weight of pork, for the amount of food consumed, than any other breed yet tried among us. A very important characteristic of the breed is, that it will *readily fatten at any age.* Many hogs, it is well known, will not fatten while they are growing, or until they have reached their full size.

The average weight of the Chester stock, at sixteen months old, is from 500 to 600 lbs., and when kept till two years old, they frequently run up to 700 and 800 lbs. Our spring pigs, when killed the following fall, weigh from 300 to 400 lbs., which is considered the most desirable weight for pork—producing hams of a more salable size and better quality. As a general rule, our farmers do not care to have their hogs weigh over 350 to 400 lbs. To reach this weight at 9 months old, our hogs, of course, must be well fed. The Chester is not different from other stock in this respect—to thrive well, it must be well taken care of.

Experiments have been made in crossing the Chester with other breeds—such as the Berkshire, Suffolk, &c., and the result has been an inferior stock to the pure Chester. It *does* improve the Berkshires to cross them with the Chester, but we have found no advantage in crossing the Chester with any other.

Mr. Folsom inquires, which is the larger and more profitable, the Chester or the Suffolk. Our experience is, that the Suffolks will not endure either severe heat or cold, and though they fatten readily, the bacon has not proved equal, nor will they weigh *half* as much as the Chester, at the same age and with the same feed.

The demand from abroad for the Chester breed has been increasing for several years past, till it has become quite an extensive branch of trade among some of our farmers. Among those who are more largely engaged in raising them for sale, whose names occur to me at present, are Mr. Thomas Wood, Pennington-ville, Chester Co., and Mr. Alfred A. Tangny, West Chester, Pa. Mr. Wood told me recently, that he had supplied orders from ten different States within a short time past. I allude to this, and might further add for the information of your readers, that these gentlemen are entirely reliable, their stock of undoubted purity, and I presume that they are ready at all times to answer questions, or drive a fair bargain with any or all that may want to test the merits of our "Chester County" porkers. J. L. D. *West Chester, Pa.*

We have also received a note on this subject from *R. S., Newcastle, Pa.*, who says in relation to Chester Co. and Suffolk hogs: "I am breeding both of pure blood, and they are a great deal larger hogs and as good grass hogs as the Suffolk,—being as fine in every respect, containing all the best qualities of the best hogs ever bred in this county. At the age of from eight to twelve months, they will weigh one-third if not one-half more than the Suffolks."

### Early Beef in Wisconsin.

MESSRS. EDITORS.—The "Wisconsin Weekly Frel Democrat"—published at Milwaukee—of June 3d contains the following paragraph, which, if not equa to some of the large colts lately noticed in your valuable weekly, may probably find a place in your columns as an item of evidence in the case now before the public—Hereford, Native and Devon, vs. Durham. "*Early Beef.*—Last week, Messrs. J. & F. Layton sold to Mr. Grange, of this city, a pair of half-bred Durhams, bred by John P. Roe, Muskego, and sired by his imported bull. One of them was a heifer, which brought a pair of twin calves this winter, and was only one year and ten months old, and the other just two years old. The pair together weighed 2710 lbs., and had no other feed through the winter than good hay. At six dollars per 100 lbs., the price of first quality beef, they amount to the snug little sum of $162 60; a pretty good argument in favor either of Mr. Roe's breed of cattle, or the quality of Mr. Layton's hay." JOHN SMITH.

### Lightning Conductors.

As this is the season of the year that the most danger is to be apprehended from the effects of lightning, the writer hopes he may be pardoned for publishing the following suggestions for the erection of safe and *cheap* conductors. If one human life is saved through the means of this publication, those who are engaged in the sale of conductors at such exorbitant prices that but few purchase, should not allow themselves to complain, but feel thankful for the timely hint. If the property contained in one barn even, is saved from destruction by this simple means, the writer will feel amply rewarded for his trouble.

There being no dispute about the perfect safety of conductors to life and property, the only questions to be considered are, which are the safest and cheapest? There is no person familiar with the subject who will not say that soft iron rods in one continuous length, projecting to a sufficient height above the highest point of a building, and terminating in a well or cess-pool, or in damp earth, are the best electrical conductors known. Now, instead of erecting a single rod from the center of the building, and running over the roof, with fancy points and colored insulators, such as are hawked about and sold at high prices, put up as many as you have chimneys at least, and one at each gable end or high projecting point of every out-building. To do this cheaply, purchase a coil of quarter-inch iron wire, and as many small staples as may be required; saw off as many pieces of bone of proper length and size, with a hole of suitable dimensions for the wire to pass through and with a ladder and the help of one man, a person of ordinary ingenuity can put up a dozen rods in half a day, at a cost of *one cent a foot.* Who will run the risk of life and property, when perfectly safe conductors can be erected for less than a dollar a piece, including the cost of putting them up? E. J. MCCARTHY. *Saugerties, N. Y.*

## Manures—Muck, Peat, &c.

In previously published numbers, under the above heading, we have written mostly on animal manures, In this, we shall have something to say on swamp-muck, peat, vegetable mold, and leaves from the wood-lands, spent-tan, saw-dust, &c. We are fully aware that much has been published upon the above subjects, and it would seem as though nothing new could be said respecting their value to the farmer. But manure is one of those subjects that will bear "line upon line," for in one form or another it is the life-blood of successful farming in all the older and long cultivated sections of our country; and the better the farming in any country or section thereof, the better is the true value of manures understood and appreciated, by the cultivator of the soil, whether he tills a farm of hundreds of acres, or only a kitchen garden.

The most abundant resources for obtaining materials for improving our exhausted soils, in connection with farm-yard manures, are the rich deposits of our swamps, peat-bogs, &c. These are spread all over the country in patches of a few rods square, to tracts of hundreds and thousands of acres. These deposits are mostly made up of decaying and decomposed vegetable matters and the finest particles of soil. There seems to be a material difference in the manurial value of swamp mucks taken from different localities, even when to the eye they present no perceptible difference in their texture or composition. Some are so constituted that they are, in their natural state, a good manure for grass-lands, for potatoes and some other crops. We have more than once seen the rankest kinds of clover and herds-grass grown upon the borders of a ditch, from which the muck had been thrown out and spread for a few feet in width; and we have also seen great crops of potatoes grown in drained swamps, without the aid of any manure. We have also seen, where the muck has lain for two or more years, the whole covered with a dense mass of Kentucky blue grass, or what is about the same thing in New-England, June grass. And we will just say here, that where the tough swarded June grass naturally grows, the soil is naturally adapted to a healthy growth of corn, wheat and timothy, or herds-grass.

There are others that do not materially differ *in appearance* from the kind above named, yet in their raw state they would actually prove detrimental to most crops, if liberally applied to the land without any previous composting or preparation. The cause of this difference is partly due to the different plants of which the muck is composed, and also in the freeness of organic and mineral acids in the better kinds, and excess of vegetable and mineral acids in the poorer kinds. These last are peculiarly favorable to the growth of sorrel. During a dry autumn, several years ago, a farmer dug from a swamp some twenty loads of muck, and left it in a pasture, where it remained about one year, when it was carted to his barn cellar. An inch or two of the fine portion of the heap was left on the ground. The next year the ground was destitute of vegetation; the following year the spot was covered with a dense mass of sorrel, and has so remained. Another dug about the same quantity from his swamp, which was carted out, and remained till the following summer; but instead of sorrel, the white clover and June grass sprang up.

In the first case the basin shaped swamp was surrounded with rocks and ledges of gneiss rocks, largely impregnated with sulphur and iron; where exposed to the atmosphere, they gradually decomposed, forming sulphate of iron (copperas); this is readily soluble, and was washed into the small swamp, and the muck was saturated with copperas water, salts of iron, and other acids,* hence its unfitness for manure in its natural state. Such muck should be dug and laid in long, narrow, conical ridges. In course of one or two seasons much of the acid would be washed out, and some other changes would take place so as to very much lessen its deleterious and acid qualities. It might then be used in composting with green manure, spread over the barn-yard, or thrown into the hog-yard; a few months time would render it a salutary manure. Or, after having lain a year or so after being taken from the swamp, it might be profitably composted with with lime. The results of this would be, to take up the sulphuric acid from the iron and alumina (if there was any clay in the muck), thus destroying the easily soluble copperas and alum, and forming the almost insoluble sulphate of lime, or gypsum. In this case the farmer gets healthy, decomposed vegetable matter; peroxide of iron, alumina, and gypsum, and all these are retainers and fixers of the ammonia of the manure applied to the land, and of that also, which falls in the rain and snow

The best kind of muck spoken of, grew in a similar basin-shaped depression, surrounded with granite rocks: their slow and gradual decomposition afforded potash, which in some degree seemed to neutralize the acids of the muck; no white moss grew in this swamp, neither was the muck saturated with copperas water. It possessed all of the good qualities of the poorer, acid kind, and none of its bad qualities, hence it was favorable to the growth of the white honeysuckle, June grass, &c., almost as soon as dug.

We believe there are hundreds of our farmer readers, that are perfectly familiar with the differences in the value of swamp mucks as we have described. The same remarks will apply to *real peats*. Perhaps in their ultimates, there is no great difference in swamp muck and peat; but it is frequently difficult getting the compact stringy peat into an equally fine state of division with the less coherent muck.

Most farmers are now aware of the great value of muck, &c., as absorbents in taking up and retaining the liquid portions of manure. But decomposing vegetable matter in the soil, and in the processes of vegetable growth, plays other important parts than in absorbing the urine and retaining the ammonia of manure, and that brought to the fields in rain and snow water.

It is principally due to the vegetable accumulations of our forest lands, that they are so productive for years after they are first cleared. There is a rawness and acidity in these accumulations, that are unfavorable to the healthy growth of most of our cultivated crops. But in clearing land, the trees are generally felled and burned upon the ground, the potash of the ashes neutralizes the acidity of the unburned vegetable matter, and thus prepares the land for luxuriant crops of grain, grass, &c. All decomposing vegetable matter produces acids, from the best extra Genesee flour down to apple pomace. Dough made from the best of wheat flour, when over-fermented becomes sour. But the prudent housewife does not throw her dough out of the window or into the swill-tub, because it has become acid. No, she adds a little saleratus or soda; its sourness is neutralized, and she thus makes a sweet palatable bread. So the ashes of the burned forests neutralize the acids of the rotted leaves and wood of the newly cleared land, and thus prepare it for the production of heavy crops. The decomposition of vegetable matter, as already said, produces acids; the decomposition of all animal matter produces alkalis—that is, ammonia; this, like potash and soda, possesses the quality of combining with and neutralizing acids—thus, animal flesh, or manure, composted with swamp muck, will yield ammonia, and this, combining with the acids of

* The muck was covered with a dense growth of the sphagnous, or white moss.

will not make money out of him, but this I will fearlessly say, that if the people of that new continent had but one chance of getting the Short-horned breed in all the world, it would not have been a hard bargain for them and their posterity to have given, instead of $6,000, $600,000 for a single animal! C. M. C. *Madison Co., Ky.*

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## Early Beef in Wisconsin.

MESSRS. EDITORS.—The "Wisconsin Weekly Frel Democrat"—published at Milwaukee—of June 3d contains the following paragraph, which, if not equa to some of the large colts lately noticed in your valuable weekly, may probably find a place in your columns as an item of evidence in the case now before the public—Hereford, Native and Devon, vs. Durham.

"*Early Beef.*—Last week, Messrs. J. & F. Layton sold to Mr. Grange, of this city, a pair of half-bred Durhams, bred by John P. Roe, Muskego, and sired by his imported bull. One of them was a heifer, which brought a pair of twin calves this winter, and was only one year and ten months old, and the other just two years old. The pair together weighed 2710 lbs., and had no other feed through the winter than good hay. At six dollars per 100 lbs., the price of first quality beef, they amount to the snug little sum of $162 60; a pretty good argument in favor either of Mr. Roe's breed of cattle, or the quality of Mr. Layton's hay." JOHN SMITH.

## Lightning Conductors.

As this is the season of the year that the most danger is to be apprehended from the effects of lightning, the writer hopes he may be pardoned for publishing the following suggestions for the erection of safe and *cheap* conductors. If one human life is saved through the means of this publication, those who are engaged in the sale of conductors at such exorbitant prices that but few purchase, should not allow themselves to complain, but feel thankful for the timely hint. If the property contained in one barn even, is saved from destruction by this simple means, the writer will feel amply rewarded for his trouble.

There being no dispute about the perfect safety of conductors to life and property, the only questions to be considered are, which are the safest and cheapest? There is no person familiar with the subject who will not say that soft iron rods in one continuous length, projecting to a sufficient height above the highest point of a building, and terminating in a well or cess-pool, or in damp earth, are the best electrical conductors known. Now, instead of erecting a single rod from the center of the building, and running over the roof, with fancy points and colored insulators, such as are hawked about and sold at high prices, put up as many as you have chimneys at least, and one at each gable end or high projecting point of every out-building. To do this cheaply, purchase a coil of quarter-inch iron wire, and as many small staples as may be required; saw off as many pieces of bone of proper length and size, with a hole of suitable dimensions for the wire to pass through and with a ladder and the help of one man, a person of ordinary ingenuity can put up a dozen rods in half a day, at a cost of *one cent a foot.* Who will run the risk of life and property, when perfectly safe conductors can be erected for less than a dollar a piece, including the cost of putting them up? E. J. MCCARTHY. *Saugerties, N. Y.*

## Manures—Muck, Peat, &c.

In previously published numbers, under the above heading, we have written mostly on animal manures, In this, we shall have something to say on swamp-muck, peat, vegetable mold, and leaves from the wood-lands, spent-tan, saw-dust, &c. We are fully aware that much has been published upon the above subjects, and it would seem as though nothing new could be said respecting their value to the farmer. But manure is one of those subjects that will bear "line upon line," for in one form or another it is the life-blood of successful farming in all the older and long cultivated sections of our country; and the better the farming in any country or section thereof, the better is the true value of manures understood and appreciated, by the cultivator of the soil, whether he tills a farm of hundreds of acres, or only a kitchen garden.

The most abundant resources for obtaining materials for improving our exhausted soils, in connection with farm-yard manures, are the rich deposits of our swamps, peat-bogs, &c. These are spread all over the country in patches of a few rods square, to tracts of hundreds and thousands of acres. These deposits are mostly made up of decaying and decomposed vegetable matters and the finest particles of soil. There seems to be a material difference in the manurial value of swamp mucks taken from different localities, even when to the eye they present no perceptible difference in their texture or composition. Some are so constituted that they are, in their natural state, a good manure for grass-lands, for potatoes and some other crops. We have more than once seen the rankest kinds of clover and herds-grass grown upon the borders of a ditch, from which the muck had been thrown out and spread for a few feet in width; and we have also seen great crops of potatoes grown in drained swamps, without the aid of any manure. We have also seen, where the muck has lain for two or more years, the whole covered with a dense mass of Kentucky blue grass, or what is about the same thing in New-England, June grass. And we will just say here, that where the tough swarded June grass naturally grows, the soil is naturally adapted to a healthy growth of corn, wheat and timothy, or herds-grass.

There are others that do not materially differ *in appearance* from the kind above named, yet in their raw state they would actually prove detrimental to most crops, if liberally applied to the land without any previous composting or preparation. The cause of this difference is partly due to the different plants of which the muck is composed, and also in the freeness of organic and mineral acids in the better kinds, and excess of vegetable and mineral acids in the poorer kinds. These last are peculiarly favorable to the growth of sorrel. During a dry autumn, several years ago, a farmer dug from a swamp some twenty loads of muck, and left it in a pasture, where it remained about one year, when it was carted to his barn cellar. An inch or two of the fine portion of the heap was left on the ground. The next year the ground was destitute of vegetation; the following year the spot was covered with a dense mass of sorrel, and has so remained. Another dug about the same quantity from his swamp, which was carted out, and remained till the following summer; but instead of sorrel, the white clover and June grass sprang up.

In the first case the basin shaped swamp was surrounded with rocks and ledges of gneiss rocks, largely impregnated with sulphur and iron; where exposed to the atmosphere, they gradually decomposed, forming sulphate of iron (copperas); this is readily soluble, and was washed into the small swamp, and the muck was saturated with copperas water, salts of iron, and other acids,* hence its unfitness for manure in its natural state. Such muck should be dug and laid in long, narrow, conical ridges. In course of one or two seasons much of the acid would be washed out, and some other changes would take place so as to very much lessen its deleterious and acid qualities. It might then be used in composting with green manure, spread over the barn-yard, or thrown into the hog-yard; a few months time would render it a salutary manure. Or, after having lain a year or so after being taken from the swamp, it might be profitably composted with with lime. The results of this would be, to take up the sulphuric acid from the iron and alumina (if there was any clay in the muck), thus destroying the easily soluble copperas and alum, and forming the almost insoluble sulphate of lime, or gypsum. In this case the farmer gets healthy, decomposed vegetable matter; peroxide of iron, alumina, and gypsum, and all these are retainers and fixers of the ammonia of the manure applied to the land, and of that also, which falls in the rain and snow

The best kind of muck spoken of, grew in a similar basin-shaped depression, surrounded with granite rocks: their slow and gradual decomposition afforded potash, which in some degree seemed to neutralize the acids of the muck; no white moss grew in this swamp, neither was the muck saturated with copperas water. It possessed all of the good qualities of the poorer, acid kind, and none of its bad qualities, hence it was favorable to the growth of the white honeysuckle, June grass, &c., almost as soon as dug.

We believe there are hundreds of our farmer readers, that are perfectly familiar with the differences in the value of swamp mucks as we have described. The same remarks will apply to *real peats*. Perhaps in their ultimates, there is no great difference in swamp muck and peat; but it is frequently difficult getting the compact stringy peat into an equally fine state of division with the less coherent muck.

Most farmers are now aware of the great value of muck, &c., as absorbents in taking up and retaining the liquid portions of manure. But decomposing vegetable matter in the soil, and in the processes of vegetable growth, plays other important parts than in absorbing the urine and retaining the ammonia of manure, and that brought to the fields in rain and snow water.

It is principally due to the vegetable accumulations of our forest lands, that they are so productive for years after they are first cleared. There is a rawness and acidity in these accumulations, that are unfavorable to the healthy growth of most of our cultivated crops. But in clearing land, the trees are generally felled and burned upon the ground, the potash of the ashes neutralizes the acidity of the unburned vegetable matter, and thus prepares the land for luxuriant crops of grain, grass, &c. All decomposing vegetable matter produces acids, from the best extra Genesee flour down to apple pomace. Dough made from the best of wheat flour, when over-fermented becomes sour. But the prudent housewife does not throw her dough out of the window or into the swill-tub, because it has become acid. No, she adds a little saleratus or soda; its sourness is neutralized, and she thus makes a sweet palatable bread. So the ashes of the burned forests neutralize the acids of the rotted leaves and wood of the newly cleared land, and thus prepare it for the production of heavy crops. The decomposition of vegetable matter, as already said, produces acids; the decomposition of all animal matter produces alkalis—that is, ammonia; this, like potash and soda, possesses the quality of combining with and neutralizing acids—thus, animal flesh, or manure, composted with swamp muck, will yield ammonia, and this, combining with the acids of

* The muck was covered with a dense growth of the sphagnous, or white moss.

the muck will neutralize them, and prepare a healthy food for our crops.

As long as a dry soil contains a good supply of decomposing vegetable matter it will usually produce good crops, but in time it becomes used up, then the plow and manure must follow. During the rotting of the vegetable matter of the recently cleared land, this vegetable matter as it decomposed, produced carbonic acid; this in the soil with water, displaced the silicic acid in combination with the potash of the feldspar portion of the soil, and thus slowly supplied potash; a similar process liberated the lime and other mineral matters of the soil. This vegetable matter renders a dry soil more retentive of moisture; lightens a compact, heavy soil, and yields by its decomposition, direct food to the new growth of plants. It also supplies carbon, in the form of carbonic acid, directly to the roots of the plant. Doubtless much the greater portion of the carbon, in all woody and herbaceous plants, is derived from the carbonic acid of the atmosphere. But experiments seem to prove, that an atmosphere containing a much larger proportion of carbonic acid than does ours, is favorable to the more luxuriant growth of plants; if so, then we can supply it to the soil, by adding more largely of properly prepared decaying vegetable matters, such as our swamps afford.

Theory would seem to indicate that some soils may be cropped for an indefinite period, with a certain kind of plant, without exhaustion, if only manured with little else than readily decomposable carbonaceous matter. How far practice will, in this, sustain theory, might be readily ascertained.

To illustrate the foregoing we will take the sugar making of Louisiana. The sugar cane is cultivated solely for its sugar. Sugar cane is composed of water, woody fibre, and soluble matter or sugar. In round numbers the proportions are 72 per cent of water, 10 per cent woody fibre, and 13 per cent of sugar. Sugar is shown by organic analysis to consist entirely of carbon, and oxygen and hydrogen; these two last are in the same proportion in which they form water.

"It was formerly doubted whether any of the carbon of plants was derived from the soil, but later researches have put this point at rest, and have shown that a large portion of this element is derived by plants from the carbonic acid evolved from vegetable substances during their decay in the soil, either by its inhalation into the roots in an æriform state, or by its first entering into solution in the water found in the soil, and being afterwards absorbed in this form by the roots. The experiments of Sir Humphrey Davy on this point, appear conclusive; that eminent chemist having shown that different plants and grasses grow much more luxuriantly when watered with solutions of sugar, than with common water; the two liquids differing in nothing but the presence of carbon in the former, and its absence in the latter.'

"The oxygen and hydrogen found in the sugar cane in the state of water, or as constituent elements of the sugar and woody fibre, form about nine-tenths of its weight, and are entirely derived from the atmosphere and from water, thus abstracting nothing from the soil. Now if the bagasse, (the crushed cane,) and the leaves and tops of the cane, were returned to the soil, says Mr. Fleischman, 'we should never hear of a soil being worn out on a sugar plantation in Louisiana.'"

The carbonaceous matter and the trifling amount of mineral matter in the cane, would seem all that is necessary to keep up the fertility of these soils. The vegetable accumulations of our swamps, properly prepared and freely applied, would undoubtedly do much, very much, in keeping up the fertility of our soils, even where the crops abstract much more largely of the mineral bases than does the sugar cane. We have spun a longer yarn than we thought of when we commenced this, therefore, we must defer noticing tan, saw-dust, &c., named at the commencement of this article.

## Work-Shops and Stormy Days.

Every farmer who has boys should provide them a *work-shop*. It may be a building erected on purpose, or else partitioned off from the carriage-house, corn-house, or other out-building. Let it be neatly made, and not unpleasantly situated, for it should be attractive and not repulsive to those for whom it is intended. It should be tight, and furnished with a small stove, so as to be comfortable in winter. It should be provided with a work-bench and vice, a shaving-horse for using the drawing-knife, and perhaps a small foot-lathe. The two latter are convenient but not essential. The tools should be two or three planes, augers of different sizes, a few chisels, a brace-bit, drawing-knife, saw, and hammer. A small part of these will answer, and others may be added—the cost of the tools varying from five to twenty-five dollars.

Such a work-shop will afford several important advantages. The greatest is the assistance it will render the cause of *practical education*. The best inheritance any man can leave his children, is, not wealth to support them, but *the ability to help and take care of themselves*. A young man, whose natural ingenuity is so developed by practice that he can at any moment repair a rake, adjust a scythe, fit in a new hoe-handle, set a clock in running order, sow a broken harness, make a door-latch fasten easily, set a gate in good swinging condition, sharpen a pen-knife, give edge to a pair of scissors, mend an umbrella, repair a cistern-pump, whitewash a ceiling, paper a room, stop a leaky roof, make a bee-hive, bottom a chair, and black his own boots, will pass through the world more comfortably to himself, and profitably to those around him, and be far more worthy of the hand of the finest young woman in the country, than the idle and sluggish pretended gentleman, with pockets full of cash earned by his father, and who is obliged to send for a mechanic for all these things, which he is too helpless to perform himself. Dr. Franklin said, "if you want a good servant, serve yourself;" and, "if you wish your business done, *go*; if not, *send*;" and these sayings apply with especial appropriateness to such as have those jobs to perform, commonly known as "odds and ends."

Another important advantage afforded by such a work-shop is its *moral* influence in furnishing pleasant employment to boys during rainy or stormy weather or other leisure hours, and lessening the temptation to frequent taverns, and to attend places of diversion—often leading to the most pernicious habits.

Another, is the actual saving of expense to the farmer, in having around him ingenious boys, who will repair immediately any broken article, and save the cost of carrying it to the neighboring village, and the delay and inconvenience, often much greater, of waiting till it is mended. They will be able also to manufacture many of the simpler wooden implements required for farm use.

To keep every part of a farm and premises in the best and neatest order, cannot be accomplished unless the owner or his sons are of ready and active hands. Those who depend on hired men to perform the innumerable little services which this condition of a farm requires, will find that these services must be connected with an amount of constant observation and thought which cannot be secured by simply paying wages. It is therefore essential to educate the young managers to use their own hands, and become habituated to hand-work and thinking together; and the various operations connected with the work-shop will be found a most important auxiliary in accomplishing this very desirable result.

### Salting Hay—two Dangers Attending it.

The season of cutting and curing grasses and clover for hay being near at hand, it may be well to remind some and inform others that there are wrong as well as right ways of performing this simple operation; or, in other words, that there are errors, and dangers of of loss and damage, which ought to be avoided in the application of salt to hay. There are, probably, several who have discontinued the practice of salting their hay; some on account of the trouble and difficulty of having it done properly, which consists in applying it in small quantities to each successive layer, and some for other reasons, among which this may be one that that they now know of a better way of administering salt to their stock. Still though some may have discontinued it, there are not a few who continue to think it, what it was almost universally esteemed some years ago, a first-rate practice. To such and to all who are likely to apply salt to their hay, we submit the following suggestions.

If salt is applied in too large quantities the animals fed upon it will certainly lose in condition. When an animal is forced by long abstinence, or by its food being too highly salted, to partake of salt in quantities beyond what the natural instinct of the animal would dictate, then it becomes poisonous or injurious, and deteriorates the health and condition of an animal by undue secretions from the liver, bowels, &c. These excessive secretions rob the animal of a portion of its food, and carry off what would otherwise be converted into fat, or flesh, or milk, &c

It thus becomes a matter of considerable *practical* importance to determine what is the quantity of salt which an animal would naturally or instinctively crave during the consumption of a ton of hay. Some have recommended as much as 8 quarts of salt to each ton of hay; and very few have ever recommended any less a quantity than 4 quarts. Now it is our firm persuasion, from observations made by ourselves and others, that in the cold months no creature would crave or voluntarily eat as much as even 2 quarts of salt during the time of its consuming a ton of hay. If so, this quantity and all beyond it, would only be injurious to cattle or stock of any kind, when forced upon them with their food.

This is one of the errors or dangers which it would be well to guard against. The other consists in the practice of getting in hay in a damp or partially cured state, under the supposition or expectation that a free application of salt will preserve it from heating, moulding, or otherwise spoiling. A quantity of salt which would be effectual for this purpose would make the hay injurious, or absolutely poisonous from excess of saline matter.

### Further Experience with Wolf Teeth.

Messrs. Editors—Seeing a communication in your paper concerning Wolf Teeth in horses' mouths, the writer of which relates his experience and requests others to furnish information on the subject, I therefore submit the following. Three years ago I had a valuable mare, an especial favorite, four years old, troubled with a weakness of one eye, like that described by your correspondent. I applied water, but it still continued to inflame, which inflammation threw out a white substance and also made a thick film on the eye, causing its total blindness. A person informed me of the cause, which he attributed to wolf teeth, and upon examination a small tooth was found adhering to the first grinder on the opposite side of the mouth from the affected eye. This was removed by placing the end of a piece of iron against the wolf tooth and striking the other end with a hammer. It took but a moment, and caused no pain to the animal apparently. After this operation the inflammation ceased, the film came off, and the eye was thought to be permanently cured. But in a few months the same eye showed evident signs of the old difficulty. I now thought my mare to be doomed as far as seeing was concerned, as no more wolf teeth could be found; yet I resolved to take her to a man who was skilled in cases of all kinds pertaining to horse-flesh. He pronounced the difficulty to be a "hook" in the eye. This is a fleshy substance growing upwards from the inside of the eyelid, tipped by a hard point which constantly scratches the eye-ball and causes great irritation, a film, and consequent blindness. The removal of this hook is a more difficult matter than the operation of taking out a wolf tooth. The horse must be confined by means of a strong rope halter so that the head cannot be moved. It is absolutely necessary to fasten the head in some way, as a sudden start of the horse might cause the knife of the operator to wound or ruin the eye.

In this instance, a strong rope halter was put on, and passed through a hole bored in the side of a barn, and firmly held inside by two men. A blanket or other protection should be placed between the head and barn to prevent galling the former by coming in contact with the barn. When the horse is made fast, put the finger between the hook and eye-ball, so that the hook will lie against the nail of the finger. Then, with a small keen blade, cut the hook out as near the root of it as possible. The eye thus wounded will be very sore, and should be washed with cold water often till well restored. In the case of my horse, after the hook was removed the eye soon recovered, but another hook grew, for the reason that the first one was not thoroughly taken out. The operation has been performed three times, with intervals between of from six months to a year; yet I am of the opinion that one *thorough* operation would have been sufficient. The eye, of course, after being so many times inflamed, would not be likely to regain its clearness entirely, which it has not done, still the sight is not wholly destroyed. The other eye is perfectly sound.

The last hook was removed two years ago, and there has been no indication of a renewal.

The above, Messrs. Editors, are *facts*, notwithstanding those authors who are considered the best authorities, seldom mention the *hook* disease, and then only to discard the idea of its existence. L. A. Cooke.
*Colebrook. Conn.*

### Stacking Hay and Grain.

In my opinion, nothing looks better around a farmer's barn, than a nice lot of well built stacks of hay or grain. When we see them, the first thought usually is, "that is a neat farmer." That stacks are much better for the grain and hay when well built, is admitted by all, though the custom of making them is so rarely practised. More than half the stacks you see put up, look as though they were going to tumble over with the first blast of wind. If the directions given below are followed, you will have a neat, prim looking stack, of no matter what size you make it.

Lay your bottom of old rails, old trees, or any such material that you may have on hand, so as it will admit of a current of air passing under it. One rail square will take twenty tons of hay, when well built. Lay on your hay to cover the bottom all round, and just sufficient to cover the outsides; in laying on the hay, keep it well shaken out, as if laid on in lumps

it will slip. Then draw your bottom up four to six feet high, (according to the size you intend your stack,) in shape of a bowl; in building up to this height, you keep your centre hollow as you proceed.

You then commence to draw in, keeping as before your centre hollow and your hay well shaken out. When you come to within four or five feet of the top, commence to raise it in the centre, so that it droops from centre to edge; in this way you finish. In unloading, have your loads delivered regularly around the stack, for if unloaded more at one place than another, it will throw your stack in; the same with your ladder, keep it regularly shifted around the stack. When all is finished, have the bottom pulled from your foundation to where you commenced to draw in; this gives you a nice, regular eave all round, and prevents the rain when running down the stack from penetrating into the bottom, for the eave projecting over, throws the water completely off. Finally rope your stack with hay ropes, six or eight all regularly over it, and divided equal distances apart, fastening them under the eave by driving sticks into the stack and fastening to them. If the stick is crooked at one end so much the better. Your stack is then finished as all stacks should be. GERALD HOWATT. *Sussex Co., N. J.*

### Feeding Cows and Production of Milk.

MESSRS. LUTHER TUCKER & SON—The frequent calls of business must be my excuse for not having before replied to your questions published with my communication in the Co. Gent. of May 24th. You ask—"how many quarts of milk, cows of average quality will give daily, in summer as well as in winter, if they are fed with grain while in pasture, or wholly kept in the stable—and what probable increase in milk caused by feeding grain, and its increased cost?"

I will endeavor to give you a *reply*, but fear I am not able to answer your questions fully and satisfactorily. Our cows are *not* kept up in the stable in the summer season, but turned out to pasture—and are not fed with grain, while in pasture, except when we happen to have a cow that is in very low condition, and on being turned out to grass continues to fail; we then give her a little feed, say from two to four quarts of meal daily, which I have found to be very beneficial. And again, we begin to stable our cows nights, generally, about the middle of October, when the first cold nights come on, and then begin to give them some grain. We raise two or three acres of sowed corn, and begin to feed it to them in August, what they will eat once a day, and I think that a few acres of land cant not be put to a better use. Although we have never done it, I am inclined to the opinion that it would be advantageous to feed our cows a little meal all summer; of one thing, at least, I am well convinced, that the majority of farmers do not begin soon enough in the fall to feed their cows, but allow them to lie out on the cold frosty ground through the months of October and November, and to work—yes, literally to *work*—at the short, frost-killed, dried-up and eaten-up pasture lands, until their condition and quantity of milk is so reduced, that it is utterly impossible in the face of the coming winter, to bring them back either in condition or quantity of milk, to where they would have been had they had the proper care and feed.

There is one thing certain, that a cow either starved or frozen will not give milk; and when the two are combined, the result can be better imagined than described.

Your first inquiry is one to which it is difficult to give a direct answer; it is like many other questions in agriculture, dependant very much on the attending circumstances; for instance, whether or not they are cows of good quality for milk; whether farrow or in calf; large or small sized; been milked a long time or fresh; state of the pasture, also the season, whether wet or dry, and the cows, whether well or badly kept, and I may add, well or badly milked. The extremes, I should state, according to the best of my knowledge, at from 8 or 10 to 14 quarts per day to each cow, in an ordinary sized dairy in summer, and in winter from 6 and 7 to 12 quarts per day—10 quarts I believe being considered a fair average quantity in summer, and eight quarts in winter.

These figures may seem low to many who are only in the habit of seeing statements of single cows in the papers that give 20 or 30 quarts per day of milk and *froth*. A 12-quart pail full of milk, as milked from the cow, when cooled down to 50°, and measured for market, will be found not to be 12 quarts. There are individual cases in almost all dairies, that in the flush of grass do give 20 quarts and upwards of milk per day, but they are the exceptions, not the rule, as far as my experience goes.

My dairy, at the present time, averages between 12 and 13 quarts per cow—about one-half of them fresh since February; the remainder winter cows that have come in at various times since August last, and all farrow.

It is surprising to those who have not tried it *both ways*, to see what a difference there is in the quantity of milk and *personal appearance* of a cow badly kept and poorly fed, and the same cow (more particularly in winter,) when well kept, highly fed, and nicely carded. Those who try the latter plan, I think, will never return to the old system, for the best of reasons, viz., it *won't pay*. The subject grows on my hands, but as I fear the communication is already too long, I must stop. D. C. M. *Chester.*

### Blood Spavin.

MESSRS. EDITORS—I wish to know if there is any cure to a blood spavin on a horse. If you or any of your subscribers could inform me of a remedy, it would be a great kindness to one who has a valuable mare thus afflicted. A SUBSCRIBER. *North Hadley.*

We have not had experience with this disease. We would call on our correspondents who have, and in the meantime copy the following brief remarks of Dr. DADD in his "Modern Horse Doctor."

Bog spavin is the term usually given to enlarged *mucous capsules*, or to a distended state of the subcutaneous veins in the region of the hock. In the latter case it is termed blood spavin. It will be seen, on referring to article *Spavin*, that the above abnormal state bears no resemblance to the latter; therefore the term is misapplied, and should not be made use of by any person professing veterinary knowledge. Enlarged mucous capsules in the one case, and local venous congestion in the other, are significant terms, and by them we understand the nature of the case, and also by what means they are to be treated.

The remedies for enlarged mucous capsules are, in the early stage, cold water and refrigerating lotions; in the latter stages, strong infusion of bayberry bark; and lastly, brandy and salt, perseveringly applied. Congestion may be treated in the same manner, aided by friction.

WEIGHT OF ANOTHER COLT.—Mr. SOLOMON WAIT of this place, has a Messenger colt one year old, bright bay, with black legs, mane and tail, which we have just been measuring and weighing, and the following is the result: Weight 825 lbs.; height 14 hands and one-half inch; girth 68 inches. He is a perfect model. He is a stallion. E. M. McC. *New Castle, Pa., June 23d.*

## ENTOMOLOGY

### No. 15—Grasshoppers.

SCOTT COUNTY, MINN., June 8, 1857.

MESSRS. TUCKER & SON—*The* subject of all our inquiry and solicitude at this time, is Grasshoppers. I have enclosed several specimens for examination. We want to know what to expect of them for the future. The history of them here, as far as known, is that the last of August last year, full-grown grasshoppers began to appear in our fields, and in a short time there were millions. They came from the northwest. It is said that three years ago they were at the Red River of the North, about 500 miles from here. About the last of September they commenced to deposit their eggs in the ground, any where; the hard roads were covered with them. They void from 20 to 35 eggs each. This spring they have come out, and are taking away everything that is green. Some of our wheat fields are as bare as the inside of our hands. Corn, oats and beans disappeared as soon as up. From present appearances we shall not be able to grow any kind of crops. Please give us a scientific description of them as soon as convenient, through the Country Gentleman. Truly yours, C. W. WOODBURY.

### Answer to the above by Dr. Fitch.

MESSRS. TUCKER—The intelligence from Minnesota, in the communication from Mr. WOODBURY, is truly alarming. Such facts are within our knowledge as clearly show that the grasshoppers of this country are analagous, in every respect, to the migratory locust of the east, whose career in all ages has been a series of the greatest calamities which have ever befallen the human race. "We are the army of the great God, and we lay ninety and nine eggs; if the hundredth were put forth the world would be ours!" Such is the song which the Arabs say the locust sings. No aid of oriental poetry, however, is required to impress us with the pitiable condition of a country which has been invaded by these creatures—where every particle of vegetation has been devoured, and not a mouthful of sustenance is left for either man or beast; where the inhabitants are obliged to scatter themselves with haste into other countries, to avoid starvation, and the whole land, in place of its previous bright green mantle of luxuriant verdure, is changed to a dreary, dismal waste, blackened as though fire had passed over it, and solitary, save here and there a miserable being striving to dig from the earth a few roots to keep him from famishing. The history of the locust presents to us repeated instances of scenes like this. And it is only because the grasshoppers of our own country have never yet multiplied to the same extent, that we have not experienced similar calamities here. But, as I have often stated in my public lectures, we have every reason to apprehend that, as time rolls onward, instances will here occur, that will parallel what is related of the locust in the old world. And with such tidings as Mr. Woodbury's letter brings us, our strongest fears may well be excited at the prospect now before our neighbors in Minnesota. If these grasshoppers, early in June and before any of them are grown to half an inch in length, if now when they are just hatched from their eggs and are still in their feeble infancy, they are so numerous and ravenous as to consume every green thing, rendering the "wheat fields as bare as the inside of our hands," and causing "corn, oats and beans to disappear as soon as they are up," what must be the condition of things there the coming August and September, when these same insects have grown to two inches or more in length, and their voracity has increased in the same ratio with their size and strength? Unless Divine Providence interposes, by flocks of birds, by predaceous insects and other natural causes, to cut off the greater part of this pestilent race before it reaches maturity, it appears inevitable that portions of that territory will this year be devastated in a manner that will appal us, and will everywhere excite the liveliest sympathies in behalf of our unfortunate fellow citizens who are residents there. Let us congratulate ourselves that we live in an age and country where intelligence and enterprise have furnished such facilities of intercommunication, that destitution and suffering, in any district, is relieved as speedily as it becomes known; and that nothing short of such a wide-spread and universal scarcity as we have no reason to regard as being possible, can ever produce in our land such instances of famine and its attendant pestilence, as have often occurred in former ages and are still liable to occur in many parts of the world.

The specimens sent by Mr. Woodbury are too young to determine their species. They merely show that the insect is an ordinary looking grasshopper of a black color, vaguely mottled and variegated with ash-gray or dull white, which color often forms a very distinct stripe along each side of the body its whole length. We shall be much obliged to Mr. W., if, when they have acquired their wings, he will pack a few of them in dry sawdust, in a small box, and send them to Albany to us. There are many kinds of these insects in our country, and if this proves as destructive as we apprehend, we are all deeply interested in knowing which particular species it is, and over how large a district it inhabits. It is plainly different from the Red-legged grasshopper (*Acrydium femur-rubrum*) which is our most common species here in New-York; and though this is one of the smaller kinds, growing only to an inch in length, or less, it destroys an immense amount of valuable forage in seasons when it is greatly multiplied: and when it has been most numerous, it has been known to become gregarious and migratory, exactly like the locust of the east, myriads assembling together in a flock, taking wing, and appearing like a cloud when at a distance in the sky; and wherever the swarm alights for a day or two to feed and recruit, every particle of green vegetation is consumed, causing the spot to appear as though burnt over with fire. It is surprising that the most unpalatable weeds, which no other animal will eat—the bitter May-weed, the acrid Butter-cups, the nauseating Lobelia—are devoured by these insects, apparently with the same relish as plants that are most mild and fragrant.

We hasten to present the manner in which these insects are to be subdued; and we regret that before this information can reach our Minnesota friends, the most favorable time for combatting them, namely, when they are young and small, will be past.

It may be remarked that in the case of no other insect have we so much light with respect to the best modes of conquering and quelling it, as here, where in the case of the locust, the attention not merely of individuals, but of the governments of many different nations since the earliest periods of time, has been directed to this very subject. And the only mode which long and ample experience has shown to be efficacious and reliable for subduing these creatures, is simply gathering and destroying their eggs before they have hatched, and capturing and killing the insects when they are young. And so important and indispensable is this work known to be in those countries which the locust inhabits, that to excite the inhabitants to engage in it with sufficient zeal and energy, bounties are paid from the public treasury for gathering these eggs and insects at a specified period of the year. In seasons when they are so numerous that quantities of them can be readily obtained, these bounties render it an object for the whole population to lay aside their other employments and engage entirely in this business. I regret that I have mislaid a memorandum stating the immense number of locusts that were hereby destroyed in the vicinity of Smyrna a few years since. The gov-

ernment of France, it is well known, is in advance of every other in the sedulous attention which it gives to every subject of this kind, in which the public welfare is in any degree involved. And though the locust is not a common insect there, yet a bounty is paid to promote the destruction of all insects of the grasshopper kind. A thousand dollars are some years disbursed in this way in some single counties (departments) bordering on the Mediterranean, where the insects are most numerous—about four cents per pound being allowed for the eggs and half as much for the insects. The chase begins with the month of May and continues through June; and the entire population of some villages, including the women and children, are accustomed each year to engage in it. An experienced boy, by hoeing in rocky places where the soil is shallow, will gather 12 to 15 pounds of eggs in a day, which hatched would produce half a million of locusts and over. To capture the insects, four persons drag a large piece of stout cloth briskly across a field, two in front drawing the fore edge along upon the grass and two behind holding the hind part of the cloth slanting upwards at an angle of about 45 degrees. The cloth we presume is made stiff by slender poles, sewed, one in its front and another in its hind edge, for we cannot conceive how it could be readily managed otherwise, especially upon a windy day. The insects jumping up from the grass to escape, are caught upon this cloth, and when a quantity are gathered, it is folded over them and they are then brushed or shaken into a sack. The women work singly, with a net similar to that used by entomologists for sweeping the grass and weeds to collect the small insects therefrom; and they sometimes gather herewith more than a hundred weight in a day. This information we obtain from an article in the Transactions of the Entomological Society of France, vol. ii, p. 486.

The Chinese, also, secluded from intercourse with all the rest of the world, have learned that this same method was the only effective one for subduing these insects, as appears from "an edict for the capture of grasshoppers," issued by some of the officials to their subordinates, which we meet with in Williams's Middle Kingdom, vol. i, p. 272. In this it is stated, "We now exhibit in order the most important rules for catching grasshoppers. Let the governor's combined (military) forces be immediately instructed to capture them; at the same time let orders be issued for the villagers and farmers at once to assemble and take them, thus without fail sweeping them clean away. If you do not exert yourself to catch the grasshoppers, your guilt will be very great. Let it be done carefully, not clandestinely delaying, thus causing misfortune to come upon yourselves. * * * When the wings and legs of the grasshoppers are taken off and they are dried in the sun, they taste like dried prawns, and moreover they can be kept a long time without spoiling." But we have not space for further extracts from this curious document.

From what has been adduced, our Minnesota neighbors will perceive that the only feasible mode by which they can rid themselves of these insects, is, to capture and destroy them. Their numbers, however, are undoubtedly so vast that to make any perceptible impression upon them, the combined exertions of the whole population will be necessary—such a concert as can scarcely be obtained, except by some legislative enactment. A single person, however, can probably sweep most of these insects from his own fields, with less labor than is often bestowed upon objects of less importance than this is. A net which will be very effective for this purpose may be constructed as follows: Make a bag of stout cotton cloth, somewhat tapering, and about three feet in length and eighteen inches in diameter at its mouth. Sew the mouth of this bag to a coarse stiff wire, bent into a circle of the same diameter, to which a handle about three feet long is firmly attached. Sweep fields of grain or grass with this implement, by swinging it from side to side in front of you, as you advance, like a man engaged in mowing. A little practice will render one dextrous in using this net; and every person will be astonished at the confused medley of grasshoppers, flies, beetles, and all sorts of queer looking bugs, worms and creeping things, which in some places will be gathered by it. As most of these are depredators upon the vegetation on which they occur, they may all be emptied together into a sack, and killed by pouring boiling water upon them, and fed to the swine. How effective such an implement is for work of this kind is shown by the fact stated above, that the women in France sometimes gather a hundred weight of grasshoppers in a day with it. The same work, however, can be much more expeditiously accomplished, no doubt, with two or three sheets sewed together, or a piece of canvass of similar size, managed by three or four persons in the manner above spoken of, as practiced in France. In one or the other of these ways a field may be almost entirely cleansed of these vermin, by passing over it two or three times. And if the crop can be saved from ruin hereby, it is evident that it will amply repay the labor which is thus bestowed. But where the whole country around is thronged and overrun with these insects, it is probable they will soon come in from the surround-fields and reoccupy any spot which is made vacant; in which case repeated sweepings may become necessary.

As I close this communication, the rain is pouring down copiously, which reminds me of the fact that these insects are supposed to thrive the best and become most destructive in dry seasons. Therefore if the summer proves to be as wet in Minnesota as it has been and promises yet to be in this vicinity, it may in a great measure avert the calamity which appears to be there impending. ASA FITCH. *June 30th*, 1857.

## Sugar and Shade.

EDS. CULT. AND CO. GENT.—As, in consequence of the high price of sugar and molasses during the last year, many people have been stimulated to multiply the means of increasing the supplies of these necessaries of human subsistance by manufacturing larger quantities than usual, from the maple, and by introducing the sorghum for that purpose—the idea has occurred to me to suggest that in clearing up our northern and western forests, the maple should be left as much as possible for sugar camps, shade, &c. And further, where it has not been planted by the hand of nature, that it should be planted by the hand of man; for no tree is more clean or beautiful—better adapted to the yard or lawn.

But says one, "we have not the ground to spare for growing maples, and more than that, it takes them so long to grow that we should not live to reap the reward of our labor;" to which I would respond we have the ground to spare, and that too, of the best quality for the purpose—the space about our houses. I transplanted a maple tree into my yard from the woods, about twenty years ago, when it was one inch in diameter—it is now more than three feet in circumference. If I had planted a dozen then, instead of only one, I might, long ere this, have had plenty of excellent sugar and delicious syrup for domestic use, without money and without price, as they had at my father's when I was a boy, from the majestic trees which grew spontaneously about our dwelling, but which, I am sorry to say, have all been cut down long since, and the present proprietor is exposed to the scorching rays of the summer's sun, in the absence of trees of any kind to supply their place. ISAAC CHILD. *Indian Spring Farm, Pa.*

☞ We learn that Mr. S. P. CHAPMAN has recently added to his herd of Short-Horns, by purchase from Mr. THORNE, "Victorine" and "Gazelle," the latter sired by Mr. Booth's "Monk."

## The Cultivation of the Cabbage.

EDS. CO. GENT.—There are few vegetables more extensively used or more generally esteemed than well-grown cabbages; and a few hints on their culture, which, if properly carried out, cannot fail to ensure success, may not prove unacceptable to many of your readers.

As regards sorts, the following are all that can be wished for:—Paragon and Barnes' Early Dwarf are the earliest; Enfield-market, Cattell's Reliance, and Mitchell's Prince Albert are not to be excelled in delicacy.

For the sowing of seed, I commence the first week in May. The soil for this purpose must be light and fine, and well manured at the depth of two or three inches, and top dressed with Peruvian guano previous to sowing. The quantity of seed required for a perch is two ounces, and guano three pounds. From the time the plants first appear, till they have rough or second leaves, they cause anxiety, and give much trouble to the grower, in consequence of that pest, the black-beetle-fly (*haltica nemorum*). Should the maiden leaf be attacked severely by this insect, it will be requisite to sow again; otherwise the plants will be stunted, and too long a time will elapse before they will be fit to put out. My object is quick growth, this being the great essential for a fine cabbage, and this I can ensure in the average of Jersey summers, by having them fully grown in 14 weeks from the time of sowing the seed. The best preventive to the fly is soot, sown on the young plants as soon as they make their appearance above ground, whilst moist with the morning dew, and after every shower, as the soot will be washed off the plants, or the fly will be at them again, particularly if sunny weather intervene.

After rearing the plants, the next step is to prepare the ground for their reception. The Cabbage delights in a rich, fresh, and rather stiff loam; but this is not of so much importance, provided there is a greater quantity of manure added to supply the organic matter and mineral substances taken away by previous crops. The dressing I give my land per English acre, from which I get two and in some places three scouring crops in a year, is 30 tons of stable manure, if possible from oat-fed horses, this being the richest, and 5 cwt. of salt, dug in with the manure; afterwards top-dressed with 4 cwt. of Peruvian guano, well harrowed in the surface previous to planting. The distance apart for Barnes' Early Dwarf and Paragon is 18 by 20 inches; for Enfield-market and other sorts named, 20 by 24 inches. This I find amply sufficient; but, should they be grown for the purpose of exhibition a greater space can be allowed.

Some growers make use of liquid manure for this crop while growing; but I do not approve of it, not only on account of the difficulty of its application, but in consequence of the rankness it imparts to the cabbage.

In the course of ten days after the young plants have been put out where they are to remain, they will require to be flat-hoed, not only to destroy small weeds, but to open the pores of the earth and to facilitate rooting. This is too often neglected, and the result is a tardy growth. Too great a stress cannot be laid on this part of the subject, as the effect of a good early hoeing in the culture of the cabbage must be seen to be appreciated. In three weeks from the time of planting they will require to be horse-hoed to the depth of seven or eight inches, to be repeated if possible while there is space between. In five weeks after planting they will have attained a considerable size, which will prohibit all further culture, and every day will tell upon them, so that in seven or eight weeks after planting they will be full grown, averaging five and six lbs. weight each.

The deep cultivation they receive will counteract any ill effects of a scorching summer sun, which causes other vegetables to droop, and, if a long drought occur, become tough and rank. By the system I adopt, the cabbages will look fresh and green under the hottest rays of the sun, and the earth will remain moist and cool.

If it is desired to grow cabbages at all seasons, the following table will be a guide as to the time of sowing, and the month in which they arrive at maturity, in a climate like Jersey:—

| TIME OF SOWING. | TIME OF HEADING. |
|---|---|
| 1st, till 15th May. | August, in use till Oct. |
| 1st, till 15th June. | October, " December. |
| 1st, till 7th July. | December, " March. |
| 15th, till 30th July. | March, " May. |
| 15th, till 30th August. | |

By retarding the growth of these last sown, and planting in April, they will fill up the months of June, July and August.

Barnes's Early Dwarf and Cattel's Reliance do not run to seed if sown in Jersey after the 15th July, nor will any of the other sorts named run, if sown at that period in a colder climate, but in warm early situations it is necessary to sow later.

Some growers earth or mould up their cabbages. I do not see the utility of it, and therefore never practice it, as I find that it has a tendency to prevent their hearting so soon. Earthing up is only required for the kale and brocoli tribe, having long stems and heavy foliage. Long-stemmed cabbages require more time to grow, and the cause is, almost always, shade and bad cultivation. JAMES LEVESQUE, Jr., Market Gardener, *Island of Jersey, England.*

## Cranberries from Seed.

To raise cranberry plants from seed, select the largest and best berries to be had—mash them in water—turn off the water and pulp, and the seed will be found settled at the bottom.

Sow in fine sand, in a moist location, or if on a small scale, in pots. Water every third day, and in a few days the plants will make their appearance, coming up like the bean, bringing the seed with them. This plan cannot be recommended except to produce new varieties. I have now many plants growing finely from seed saved as above last fall, and kept dry until the 2nd of April, when they were sown in pots and kept within doors except during rain.

The potato may be raised in the same way from the seed-balls, and will give about the same results—two or three good varieties to about fifteen hundred worthless. D. L. HALSEY. *Victory, N. Y.*

## Cure for Warts on Animals.

MESSRS. EDITORS—I noticed an inquiry in The Cultivator for a cure for a wart on the ankle of a fine mare. I will give a simple and easy cure: Take new quick lime—slake and scatter over, and as far under the wart as you can, and the wart will come off in a very few days, and be well. L. L. MERRIL. *Homer, N. Y.*

N. B.—I would like to hear from the man when his horse is well.

## To Cook Sweet Corn.

Trim off the husks, and immerse in boiling water, with a little salt. Boil gently half an hour; then take out the cobs, rub over some butter, pepper, and salt, and brown before a quick fire. Another plan, and one which most persons prefer, is to boil as above; afterwards, cut off the corn neatly, return to a pan containing a sufficient quantity of milk to cover, throw in a tablespoonful of butter, the same of sugar and salt, to flavor, simmer slowly for fifteen minutes, and serve up hot.

### The United States Agricultural Society's New Medal.

We present herewith an engraving of the Medal just struck for the Trial of Implements, to be reproduced in Gold, Silver and Bronze.


"DESCRIPTION—FACE.—On the face is Ceres, (Goddess of the Earth, Patroness of Agriculture,) seated upon a throne. In her right hand, which is elevated and extended forward in an attitude of invitation, she holds a wreath of honor; in her left the sickle—emblem of agricultural industry. In her lap are gathered various fruits. Her brow is crowned with the star of Empire, and her expressive countenance manifests her dignified rank as the impartial disposer of awards to the competitors. Around the rim of the medal is the classic wreath of laurel, and within this are the words, in Roman letters, "UNITED STATES AGRICULTURAL SOCIETY—MDCCCLII."

"REVERSE—The reverse side is ornamented simply with a wreath of plants, the productions of the grand divisions of the United States, emblematic of the National character of the Society. On one side are the Sugar Cane and Cotton Plant, on the other the Indian Corn and Wheat, and, at the bottom, uniting the two, is a grape vine laden with fruit and leaves. Thus the great staples of the South, North, West and East, are wreathed together, encircling a space appropriated for inscribing the name of the successful competitor."

### Care of Trees.

There are certain bad practices, which have been pursued at least as long as the memory of the "oldest inhabitant," which we have tried many times to correct with only partial success, but which are still followed by the larger portion of those who plant trees. One of these practices may be simply described as *total neglect*.

A day or two since, a man was employed to cultivate and dress a fruit garden, set out last spring, and with the space between the trees planted with potatoes. It was afterwards found that he had carefully and handsomely hoed the potatoes, but the trees, which needed special attention, he as carefully skipped. Yet, one of the trees cost as much and was worth more than all the potatoes planted on the ground.

Another man was employed to plow a young orchard, also planted with potatoes. One hill was too near the row of trees, and to save this potato plant, the seed of which was worth about half a mill currency, he allowed his team to break down and destroy the fine young tree worth more than a thousand times as much.

Our readers no doubt will recollect numberless instances where fine apple trees have been barked in plowing orchards, the great anxiety of the plowman being to give the crop a good chance, and let the trees take care of themselves.

All these facts and many others, show a general stupidity in the community, in not appreciating and giving proper care to fruit trees. Corn, turnips, cabbages, and every thing else, are carefully cultivated, but trees take the last chance, although they have cost many times more, and would with proper attention be worth by many times, all the other crops. We can account for this strange practice only on the principle that men generally, unwilling to think for themselves, prefer to follow the multitude into error, like the flock of sheep that all jumped over the fence into the well and were drowned, because a single leader happened to do so first: or for the same reason that they become accustomed to delight themselves to hear of a thousand persons tortured and killed on a battle field, while the whole community is shocked beyond measure by a single murder in Bond street, New-York. In other words, men think according to general custom, and not according to truth and reason. This accounts for the neglected trees.

We make these remarks at the present season, to induce those who carefully set out trees last spring, with all the necessary attention, to give them continued culture through the summer, and at a time when they are most apt to be neglected. It is during the most rapid period of growth, that disturbing causes, such as a hard soil, an unbroken crust, and the exhausting and checking influences of weeds and grass, exert the most detrimental effect.

We intend to resume this subject on an early future occasion, with more detail as to proper management, and in the mean time recommend every one who would be successful with young trees, to give them not only as much attention as onions and cabbages receive, but a great deal more, in the shape of a wide, thoroughly mellowed surface about them, because they are of more value. We have often spoken on this subject, and we fear we shall have to many times more, before a thorough reformation is effected.

## Plans of Houses.

We have selected and re-drawn the following plans, from among a number of sketches furnished by our correspondents. These plans combine several conveniences, and they may afford useful suggestions to those about to build, and who cannot secure the services of a professed and skillful architect. The plans are all of the first floor, being mostly, as we suppose, intended for story-and-a-half houses, the second floor of which may be easily arranged from the divisions of the first.

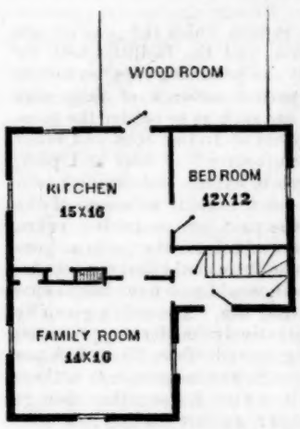

Fig. 1.

Fig. 1 is a plan of a small and cheap house, furnished by J. E. Sanborn, of Barre, Mass., and which, as he remarks, is "adapted to the use of a poor man, who can afford only a small one."

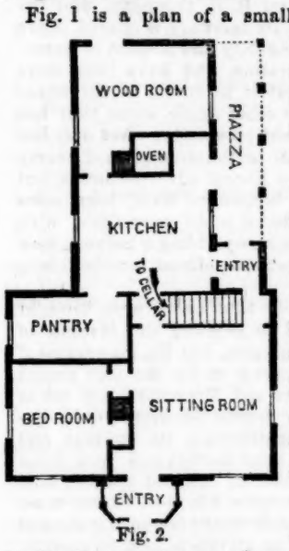

Fig. 2.

Fig. 2, is of rather larger size, from S. S. Dexter, of Orange, Mass., who states that it is a plan of a cheap house just erected at that place. Both of these plans explain themselves.

Fig. 3, is another from J. E. Sanborn, arranged for its "compactness and convenience. The kitchen may be struck off, or used as a wood-room, and the bed-room as a kitchen and the library as a bed-room."

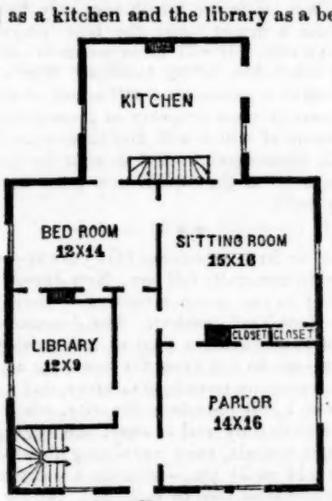

Fig. 3.

This plan has much to recommend it, on account of its neat and compact form, but a serious inconvenience will be felt by the family which occupies it, before the end of the first year, by the want of a *pantry*,—the small closet opening to the dining-room, and the imperfect space under the kitchen stairs, being quite insufficient for such a dwelling.

Philip Ritz, of Corvallis, Benton Co, Oregon, writes us as follows:

"Having noticed a plan for a small house in the Cultivator for Dec., 1856, I will give you the plan of a house I built last summer. It is much the same as the plan in the Cultivator with the addition of two small rooms, namely: a bathing room and pantry, which I am satisfied can be added to the first plan without increasing the cost over $15.00, as it takes no more outside wall to enclose the building with these two rooms than without them, and two angles less.

In maturing a plan, I kept steadily several objects in view. First, how many rooms and what size a small family would need; and secondly, what form I should build on to get the greatest amount of room for a certain expense, and in the most compact form. I was satisfied the nearer square I could build, so as to give the rooms proper shape the better, as it would enclose the greatest amount of room with a certain amount of outside wall, with the least number of angles, and in the most compact form possible. My house is 27 by 33 feet, one story 10 feet high, with steep roof, so that I have two good bed chambers on the second floor 14 by 16½ each. On the lower floor there are 7 rooms, 2 small halls, 1 closet, and 1 wardrobe under the stairs, opening into family bed room, and two fire-places. Had I plenty of money to spare I would have had all the rooms larger and the story 12 feet high, but for a small family they do very well."

Fig. 4 is copied from the sketch sent, which we think a very successful attempt in arranging the apartments of a moderate sized house; the roof having no receding angles, is consequently not subject to leakages. The only material defect we observe, is, that the kitchen is lighted and aired on but one side—windows on opposite sides, like those in fig. 3, being more favorable to a pure air, and that cleanliness which is best secured by ample light. Its position, however, would make it warmer in winter; but also warmer in dog-days.

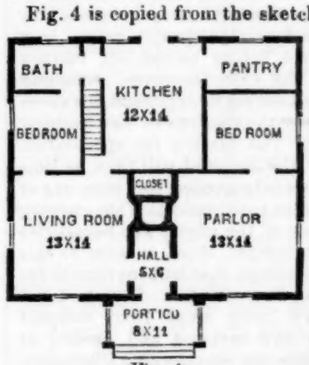

Fig. 4.

The Short-Horn Herd Book—Error in Price—In a recent notice of the three volumes of Mr. Allen's Herd Book, the price of the 2d and 3d should have been $6, *instead of* $5 *each*. The price of the set is thus $15, and they can be had by sending the same to the office of the Co. Gent.

## Notes about the West.

A GENERAL VIEW—CHICAGO, ITS GROWTH AND PROSPECTS—RAILROAD FACILITIES—THE ILLINOIS CENTRAL COMPANY—THE STATE AND THE FAR WEST MADE TRIBUTARY.

To realize the force of the line,

"Westward the star of the empire takes its way,"

as applied to our country, one must do something more than roll over "the great west" in the rail-cars. Observation in this way however extensive, is confined to a very narrow space, and that generally of the least productive and most forbidding character; and the information to be gathered in casual conversation with fellow-travellers and at the stopping places in the principal towns, is of altogether too meagre and unreliable a kind, to enable one to form any correct opinion of the agricultural capacities of Prairie Land. In spending some time at several of the chief towns, or cities as they are there uniformly called, in Illinois and Wisconsin, I had good opportunities of learning the prices of "city lots," and the perfect wildness with which the fever of speculation rages in many of them. And had I gone no further I should have returned to the East, like many others, in the full conviction that western people were verging on insanity upon the subject of "corner lots" and the value of mother earth by the "square foot,"—as indeed they really seem to be in some places—Chicago and Milwaukee for instance. It is well known that in the former, land two or three miles out of town, itself little better than a swamp, with no streets or improvements—except those on the maps, is held at higher prices than in the upper part of the city of New-York. So in Milwaukee, although rates for out-lots by no means compare with those at Chicago, yet one might suppose from the sum asked for 24 feet by 120, that land was one of the very scarcest things to be found in that vicinity.

Well informed as I was in relation to the growth and rapid extension of Chicago, as well as in regard to its commercial statistics, I must nevertheless confess to great surprise at the high prices to which real estate has been forced by the mania for speculation so prevalent for some time past. The extreme point must now have been nearly reached; and, although prices may not exceed what at some future period will become actual values, many of the vast "fortunes" supposed to have been accumulated during their present advancement, must pass away like the shadows of the morning before that day arrives. The market for speculation ere long will cease, and the demand will then be limited to the areas successively needed for purposes of improvement—to supply the requirements of the growing commerce and population of the city. The necessities of speculators can but compel them, so soon as this change shall occur, to sacrifices that will inevitably reduce, for a time at least, the valuation of most, if not all that large territory lying away from compact business localities, and now bartered and deeded at figures on which its owners are considered millionaires.

But, on the other hand, the prospects of Chicago—although she may experience times of depression and re-action,—from her position as the entre-pot and outlet of the incalculable riches developing with such wonderful rapidity in the vast tributary regions of the prairies, can hardly fail to justify even the highest expectations, nor should we be surprised to see her rank at no very distant time, as the SECOND CITY OF THE REPUBLIC. To say that she is already the largest grain exporting mart of the world, is only to mention the beginning of that immense trade which must result from the further and better cultivation of the lands of Illinois and the far west. As yet, but the first steps as it were, have been taken in opening up this almost boundless extent of fertile soil to a productive population, the fruits of whose agricultural and mechanical labor is all of it to find a market and outlet, and whose vast consumption is in turn to be supplied through the warehouses, by the vessels, and over the railroads of Chicago.

The ease and cheapness with which the prairies are brought under cultivation, and the facilities both for marketing their products and procuring supplies for the new settler, over the perfect network of rails with which the State is laid, are such as to render the prospective increase in the yield of Indian corn and other grain, and in the "manufacture" of beef and pork, almost inconceivable both in extent and rapidity, except to those who have been careful witnesses of the progress made during the past ten or twelve years. Could actual settlers have obtained the lands at government prices, there can be little doubt that the population and wealth of Illinois, would now have been nearly or quite double what they are. The credit given by owners, and the comparatively moderate prices at which many are willing to sell—from $5 to $15 per acre—nevertheless offer sufficient inducements to those who prefer to pay for railroad privileges rather than go beyond them to buy cheaper, and are leading to a wonderfully rapid filling up of the unbroken lands both of this State and of Wisconsin. The immense advertising on the part of the Illinois Central R. R. Company, and the favorable terms on which its territory is offered, have manifested a far-seeing sagacity and a spirit of enterprise unusual in a corporation, and have been more effective in attracting public attention to the whole State, than perhaps any other single cause that has operated towards its present prosperity. Not only has this company availed itself of the circulation of nearly every paper of repute, by liberal advertisements, but its handbills in diverse languages have been sown broadcast wherever a railroad could carry them, with an energy and profuseness, now yielding a harvest, both to the stockholders and the State, almost inestimable in extent.

It is not only in Illinois that every acre brought under the plow must aid in swelling the revenue of Chicago merchants and shippers, but the long trains of emigrants constantly pressing on for the still unsold government lands of Iowa and Minnesota, will all of them in a greater or less degree contribute to its enlargement and join in multiplying its business and riches. It must be their head market and chief depot of supplies, and every inch of railroad graded, and every furrow of new earth opened in these States, must add their production and traffic to the increasing streams that now center here. With all this to look forward to, it is difficult to condemn the extravagant expectations in which so many have indulged, and if we are to expect a revulsion, it is one which can only in the end establish upon a firmer basis the true progress and growth of the city. It will have much to conquer in the natural infelicities of its location. The expenses of filling it up to a grade that will admit of drainage, must bear heavily upon property at present unproductive, the owners of which will find themselves heavily taxed for its improvement, and it must be something of a burden even in the streets now most closely and handsomely built.

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THE CROP OF STRAWBERRIES this year appears generally to be an unusually full one. New Jersey farmers are beginning to pay more attention to their production for the New-York market. The Journal of Commerce states that during a part of last week and the week before—we do not know for how long a period—five steamers running from South Jersey, daily brought an average of 1,800 barrels to the city, while enough arrived in addition by rail to swell the aggregate receipts to 3,000 barrels, each containing about 200 baskets, which sold at 3½ cts.,—making a daily expenditure by the metropolitans of some $21,000, for the one item of this little fruit.

## Trials of Reapers and Mowers.

*By the Maryland State Ag. Society.*

MESSRS. EDITORS—In addition to those who had previously crossed our magnificent Bay for the purpose of being present on the interesting occasion, a large company left this city on the evening of the 6th for Chestertown, to witness the long expected trial of harvesting machines, to take place near that town on the 7th and 8th July.

The field of trial was, for the greater part, very nearly level, surrounded on two sides by trees, and sloping gently toward the north. Lanes had been cut with the ordinary cradle, so that each acre was clearly defined as upon the plat, and no impediment was in the way of a simultaneous movement of every reaper on the ground, had it been desired. The whole had been laid out carefully by a competent surveyor. The following were the entries made, and the names of the parties making them, for the premiums for reapers, and for reapers and mowers combined.

1. R. Sinclair, Jr., & Co., of Baltimore, entered Ketchum's Combined Reaper and Mower.
2. Rogers & Boyer's of Philadelphia—their Reaper and Mower called "The Union"—(an improvement on R. L. Allen's machine.)
3. R. L. Allen of New-York—his "R. L. Allen's Patent," cutting five feet, and "R. L. Allen's Patent," cutting six feet.
4. Thomas Norris of Baltimore. Manny's Patent with Wood's Improvement.
5. O. Hussey of Baltimore. "Hussey's Patent," cutting 5 feet, and "Hussey's Patent," cutting 10 feet swath.
6. Owen Dorsey of Howard Co., Md. Dorsey's Patent Self Raker.
7. E. A. Greenough of Baltimore. "Wright's Atkin's Self Raker."
8. W. & W. Armstrong of Dennisville, Chester Co., Pa. Ketchum's Patent with Hull's Improvement.
9. Wm. Johnson & Co., of Newark, Delaware. Manny's Patent with Johnson's Improvement.
10. Mobley & Keiser of Hagerstown, entered their machine, but it had been so much injured by careless and rough handling in landing from the boat, that when brought upon the ground the cutter-bar was found in such a condition that it could not be worked, and it was withdrawn.
11. B. F. Ray of Baltimore. Ray's Patent.

Mr. Hussey had a raker and Mower with self-raking attachment, upon the ground; but owing to some oversight of his assistants, there had been an improper construction of one of its important parts, and it was not entered. This is the more to be regretted because the machine promised so well in appearance, and much anxiety was shown to see it in operation.

There were therefore 14 reapers, and Reapers and Mowers combined, upon the ground, though of these only thirteen entered into competition. The same machines were entered as Reapers and Mowers combined, as Reapers simply, and as Mowers simply. Besides the above there was the entry of the "Ball's Patent Ohio Mower," as a Mower only, by Saxton & Raff, of Canton, Ohio.

The weather was quite warm, and but a very slight wind was blowing—not enough to call into special notice the peculiar advantages of the reels. Only two machines were allowed to be in motion at the same time, that the judges' attention might not be distracted, and every machine was carefully tested by one of the judges with a dynamometer. Nearly the whole of the 7th was occupied in trials of the Reapers, though many of the Mowers were tried on that day at a late hour in the afternoon. On the 8th the trials were completed. The following were the premiums as offered by the Maryland State Ag. Society, and awarded by the judges, after a most careful and laborious examination of the different machines, and a dispassionate interchange of opinions respecting each.

For the best Reaper and Mower combined, $100—to Manny's Patent with Wood's Improvement.
For the best Reaper with Self-raking attachment, $75—to Owen Dorsey's Patent.
For the best Reaper, $50—to R. L. Allen's Patent.
For the best Mower, $50—to Manny's Patent with Johnson's Improvement.

The following Discretionary Premiums were awarded:

To Ketchum's Combined Reaper and Mower, $50.
To Hussey's Reaper of 10 feet cut, $50.

There were but two entries of machines for gleaning and raking: The Wire Spring-tooth Gleaner, by R. Sinclair & Co., to which was awarded the premium of $20, and Dulany's Independent Rake, by J. Atlee of Carroll Co., Md.

Several of the machines, particularly as Mowers, were so nearly upon a par in excellence, that the judges found some difficulty in coming to a decision. The "Ball's Patent" from Ohio, was particularly admired for the precision with which it performed its work, the comparatively slight side draught, owing to the two wheels of equal peripheries on each side of the driver's seat, and the ingenious arrangement by which, by the simple operation of backing, it was thrown out of gear. It seemed to me, however, to show a disposition to clog.

*By the Ohio State Board of Agriculture.*

A trial of Mowing and Reaping Machines, we believe under the direction of the Ohio State Board of Agriculture, was held at Hamilton in that State on the 1st and 2d of July, for the particulars of which we are indebted to a correspondent who was present during the trial. There were entered for trial, 17 mowers, 16 reapers, and 13 combined mowers and reapers. The mowing machines, tested by the dynamometer, showed the following results:—

| | LBS. DRAFT. | WIDTH SWATH. |
|---|---|---|
| Ohio Harvester, | 425 | 5 feet 5 inches. |
| Iron do. | 375 | 5 " 8 " |
| Hilts' do. | 325 | 5 " 10 " |
| Allen's Mower, | 287 | 4 " 8 " |
| Atkin's, | 325 | 5 " 2 " |
| Kirby's, | 362 | 4 " 9 " |
| Whiteby's, | 350 | 5 " 0 " |
| Manny's, | 350 | 6 " 0 " |
| H. F. Mann's, | 375 | 4 " 6 " |
| Ohio Mower, | 400 | 4 " 8 " |
| Forbush's Improved, | 350 | 4 " 9 " |
| Ball, Aultman & Co., | 275 | 4 " 8 " |

The reaping machines tested by the dynamometer, showed the following results:

| | LBS. DRAFT. | WIDTH SWATH. |
|---|---|---|
| Atkins', | 275 | 5 feet 6 inches. |
| Kirby's, | 200 | 5 " 0 " |
| Whiteby's, | 225 | 6 " 0 " |
| do Self-Raker, | 250 | 5 " 2 " |
| Manny's, | 300 | 6 " 0 " |
| Hussey's, | 225 | 5 " 0 " |
| Iron Harvester, | 250 | 5 " 10 " |
| Ohio " | 275 | 6 " 0 " |
| J. J. Mann & Son, | 300 | 5 " 6 " |
| McCormick, | 300 | 6 " 0 " |
| " | 275 | 4 " 8 " |
| Hiltz, | 225 | 5 " 10 " |

The prizes were awarded as follows:

*For Mowers*—1st—$50—to Manny's Combined, entered by Baldwin, Dewitt & Co. Cleveland—2d—$30—to Ohio Mower, entered by E. Ball, Canton.

*Reapers*—1st—$50—to Atkin's Self-Raking, entered by R. Dutton, Dayton, O.—2d—$30—to Ohio Harvester, entered by Warder, Brokaw & Child, Springfield, O.

*Combined Mowers and Reapers*—1st—$50—to Manny's—2d—$30—to Iron Harvester, entered by Long, Black & Allstutter, Hamilton, O.

*By the Skaneatelas Farmer's Club.*

This interesting event, under the auspices of the *Farmers' Club*, came off on Tuesday, the 30th ult.

The number of machines was seven. The ground having been spaced off, the owners or agents of the machines drew for numbers to correspond with the allotments for each cut. Accordingly

C. S. Underhill, "Manny & Wood combined," drew No. 1
W. J. Townsend, "Kirby," ..... " No. 2

| | | |
|---|---|---|
| Baldwin & Co., "Ketcham," | " | No. 3 |
| T. P. Rhoades, "Burrall," | " | No. 4 |
| W. P. Giles, "Wheeler," | " | No. 5 |
| C. Moses, "Danford," | " | No. 6 |
| A. T. Sherwood, "Forbush," | " | No. 7 |

The rules to be observed by the judges in deciding were explicit, but definite, viz: Durability, simplicity of construction, ease of draft, execution of work. Time was not to be a criterion.

The judges reported concisely as follows: "We consider *Manny & Wood's* machine best for execution of work and of light draft. *Ketcham's* for strength and durability; lightness of draft and execution of work next best. *Burrall's* for simplicity of machinery and light draft next. *Danford's* for ease of draft and no liability to clogg, and consider it a good machine." HENRY ELLERY, SQUIRE M. BROWN, RUSSELL FROST, judges.

## United States Agricultural Society.

TRIAL OF MOWERS AND REAPERS AT SYRACUSE.

We have already given a brief notice of the preparations for this trial. It commenced on the 14th, most of the 13th being occupied in receiving and entering the machines, and arranging them upon the show grounds. The number actually presented was much smaller than the original notices, (about one-half,) many no doubt fearing the formidable competition in prospect, and the rigid trial to which they were to be subjected; and others being delayed upon their route to the place of trial.

As heretofore mentioned in our columns, Mr. JOSEPH E. HOLMES of Ohio, occupied the post of Superintendent. The Board of Judges was composed of the following gentlemen:

JOHN STANTON GOULD, Col. Co., N. Y., Chairman.

| | |
|---|---|
| SETH SCAMMON, Maine. | WM. DUANE WILSON, Iowa. |
| SANFORD HOWARD, Mass. | BROOKS SHATTUCK, N. H. |
| T. S. GOLD, Connecticut. | ELISHA R. POTTER, R. I. |
| GEO. HARTSHORNE, N. J. | JOHN J. THOMAS, N. Y. |
| FRANCIS P. BLAIR, Md. | JOHN JONES, Delaware. |
| J. L. DARLINGTON, Penn. | FREDERICK WATTS, Penn. |
| W. A. GILL, Ohio. | Gen. J. T. WORTHINGTON, O. |
| H. K. BURGWYN, N. C. | HORACE CAPRON, Illinois. |

L. WOOSTER, Wisconsin.

Of those named we understood that Mr. BLAIR took no active part, although he was present and viewed the scene with much interest. Mr. WATTS was unfortunately called away early in the week, and one or two of the other gentlemen were delayed a few days in arriving. With these exceptions, the above list represents the exact constitution of the committee, who went to work with a full determination to spend all the time and exert every effort, necessary to secure a careful impartial, and as far as possible, an exact comparative estimate of the mechanical merits and practical working of the different machines submitted to them. Their duties were laborious, and in some respects of a delicate kind, but the results ensuing must be of proportionate value, and we think more accurate and reliable than on any previous occasion of the kind in this country.

Among visitors present were officers of the Society, and many others from different parts of the Union, more or less widely known as public men, or from large personal interest in agricultural matters. Among them we remember the names of Gov. Morehead, Messrs. Mallory, O'Bannon, Brent, and others of Kentucky; Govs. King and Clark, Preston King, Henry Wager, Judge Cheever, &c., of this State; B. B. French of Washington; Speaker Banks of Massachusetts; John D. Lang, Maine; Hon. F. Smith, New Hampshire; R. R Bridges, North Carolina; Mr. Alston, California; Martin Goldsborough, Maryland, and many others. The press was quite largely represented: Horace Greely, J. Watson Webb, from New-York, Col. Whitely, H. P. Byram, and others from Louisville, Mr. Wilson of the Iowa Farmer, Mr. Gold of the Homestead, Mr. Vick of the Rural N. Yorker, and many correspondents of other papers, were actively occupied, some of them on the Board.

The trial was opened at the grounds on the morning of the 14th by an excellent and practical address from President WILDER, on the general objects of the Society, its determination to try all implements and machines in the field, before deciding on their merits, and on the aims and objects of the present trial. He was followed by Governor KING of New-York, and Governor MOREHEAD of Kentucky, whose spirited remarks were highly commendatory of agriculture and agriculturists, and congratulatory to the officers of the United States Agricultural Society.

In the afternoon, the mowers, nineteen in number, the exhibitors, officers, and the public, proceeded to a clover lot of about 25 acres, where they were arranged in line, and at a signal all started in operation. The following list comprises these machines, in the order in which they had drawn:

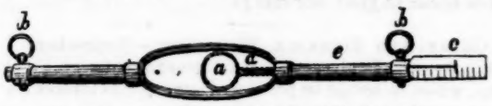
1. D. M. Osborne, Buffalo, mower.
2. Seymour & Morgan, Brockport, N. Y., combined machine.
3. Miller, Wingate & Co., Louisville, Ky., combined machine.
4. Warder, Brockaw & Child, Springfield, Ohio, combined mower.
5. Ball, Aultman & Co., Canton, Ohio, mower.
6. T. R. Hussey, Auburn, N. Y., combined machine.
7. M. Hallenbeck, Albany, mower.
8. Hull & Sanford, Poughkeepsie, N. Y., combined machine.
9. W. A. Wood, Hoosick Falls, N. Y., mower.
10. W. F. Ketchum, Buffalo, mower.
11. T. D. Burrall, Geneva, N. Y., combined machine.
12. Pells Manny, Freeport, Ill., mower.
13. Ball, Aultman & Co., mower.
14. W. A. Wood, Hoosick Falls, N. Y., combined machine.
15. A. H. Caryle, Boston, Mass., mower.
16. W. H. Hovey, Springfield, Mass., mower.
17. Rufus Dutton, Dayton, Ohio, combined machine.
18. R. L. Allen, New-York, mower.
19. Pruyn & Lansing, Albany, N. Y., mower.

This field was a severe test; the clover in many places was badly lodged, the field had not been picked of the stones, which had been but slightly rolled into the soil, and as a consequence, much of the work was imperfect. Many owners of machines were unwilling to run within five or six inches of the ground, fearing the stones, and as a consequence not one half of the machines performed really satisfactory work. The hurry and excitement of many of the drivers also produced a great deal of bad mowing. Much interest was however evinced in this preliminary exhibition, which was witnessed by about 2,500 persons, a large portion of whom were the most intelligent and enterprising of our agricultural community, and many eminently distinguished farmers from our own and other States of the Union. So large a number of experienced machinists and skillful inventors, was probably never before collected together on a similar occasion.

On the next day, the 15th, a further trial of about twenty-five mowing machines* was made on another meadow of thirty-five acres, consisting chiefly of timothy grass, and with the exception of inequalities and furrows, quite favorable for the successful performance of the work. Only four machines were permitted to operate at once, in order to allow the committees full opportunity for examination. A few of the machines performed admirably; many of them did good work, and a few cut very badly. This trial consumed the entire day, and gave the public a good opportunity for drawing their conclusions as to the merits of each mower; and the committee were enabled to examine

the many points connected with the general working of each, and the quality of the work.

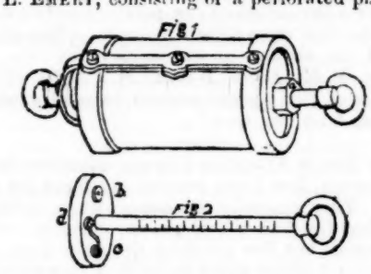
The great importance of measuring with absolute accuracy the force required for working the mowers and reapers, and the discordant and contradictory results obtained at other trials in different States, induced the committee to make great efforts to secure dynamometers whose accuracy could not be disputed. A simple and admirable instrument, very successfully used for showing the amount of side draught, is shown in the annexed cut. It is simply a neck-yoke, with a




Dynamometer for Testing Side Draft.

spring and index attached. The tongue or pole of the machine is inserted in the ring *a*; *b b* are the rings for the reception of the breast-straps. Any amount of side-draught is shown at once by the scale and index *c*, connected with the spiral spring *d*, through the iron tube *e*, (which is simply a piece of gas-pipe.) This instrument was constructed by J. E. HOLMES, of New rk, Ohio, and now first used for this purpose. Some owners of machines, who had previously regarded them as perfect in this particular, were much surprised at the amount of side-draught which this simple instrument demonstrated.

A dynamometer for measuring the draught, of very ingenious construction, giving with absolute accuracy the *whole amount* of the force expended in a given time and distance, was employed for this purpose, but from some imperfection in its manufacture, it became necessary to throw it aside. The instrument invented by H. L. EMERY, consisting of a perforated piston in a




Emery's Dynamometer.

cylinder filled with oil, and which had been thoroughly tested, was then used for the remainder of the trial, and proved fully reliable and equal to every purpose desired. The experiments with the dynamometer, which were conducted with extreme care, occupied the latter half of the week. The results of these experiments, which were not made public, are mentioned as exceedingly interesting, and as in some respects quite unexpected to makers of machines. By the breaking of the dynamometer referred to above, and from a delay in laying off the field of rye for the Reapers, most of one day was lost.

The following is the most perfect list we were able to obtain of the Reapers ready for work Friday morning. They were tried on a field of Rye a part of which was up and down hill, rendering the task rather difficult, although the execution was generally good.

1. Pells Manny, Freeport, Ill., combined.
2. T. D. Burrall, Geneva, combined.
3. R. L. Howard, Buffalo, Ketchum's combined.
4. Miller, Wingate & Co., Louisville, Kentucky Harvester.
5. Seymour & Morgan, Brockport, N. Y., Reaper.
6. T. R. Hussey, Auburn, combined.
7. Warder, Brockaw & Child, do.
8. D. M. Osborne, Buffalo, do.
9. Hull & Sanford, Poughkeepsie, combined.
10. R. Dutton, Dayton, Ohio, do.
11. Grainger & Willson, Texas.
12. W. A. Wood, Hoosick Falls, combined.
13. Pells Manny, Reaper.
14. McCormick's Reaper, and combined Mower and Reaper.

Each of these cut something over an acre, and on Saturday, with several additions and withdrawals, made a further trial of nearly equal extent. They were also tested with the Dynamometer in a small field of wheat, of which there was only enough for each machine to cut one or swo swaths. There were three self-rakers tried—those we believe of R. Dutton, Grainger & Willson, and P. Manny.

The main portion of the trial was concluded Saturday night, nothing being deferred until this week but a more careful dynamometrical test in wheat, of some of the reapers.

We hoped now to have been able to present a fuller, more entirely accurate and more largely illlustrated account of this important trial. But the duties of the week were so pressing, and the time so short that we are compelled to make the above answer for the present; while, in the absence of the report of the Judges, (which it will take some weeks to make out, and which may not be published before the September Fair) it is manifestly impossible to present the results of their private investigations, and equally unfair to hazard an expression of individual opinion.

Among entries other than of harvesters, we notice those of Hay Presses, by W. Deering & Co., of this city, and G. D. Harris of Fitchburg, Mass., and one or two of Grain Cradles, Hay Rakes and Scythe Snaths, by other parties.

Meetings were held eliciting interesting discussions, Monday evening on Farm Implements, Tuesday evening on the State of the Crops, and Wednesday evening on Grasses, at which last a valuable paper was read by Sanford Howard.

In conclusion, Saturday afternoon, President WILDER addressed the Judges, thanking them for their industrious application to the tedious labors assigned them, and thanking also the citizens of Syracuse for their hospitalities and many attentions. Mr. GOULD responded in behalf of the Judges. To ALLAN MONROE, Mayor BALDWIN, DR. WILBUR and other prominent citizens, the Society and strangers were indebted for delightful entertainments. And it will not be considered invidious, if we add that to the untiring exertions in the field of President WILDER, to the indefatigable assistance of J. B. BURNET of Syracuse, and to Mr. GOULD, the chairman of the Board of Judges, especial commendation and acknowledgments are due; while the whole committee performed the services required of them, which proved exceedingly laborious, with a cheerful and unwearied alacrity deserving the highest praise.

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RAVAGES OF GRASSHOPPERS.—In our last we gave a letter from Minnesota, describing the ravages of grasshoppers in Scott county, together with a reply to the inquiries of the writer, by Dr. FITCH. A subscriber at Clear Water, Minnesota, writes us under date of July 1, as follows:—"We are plagued with grasshoppers a few miles on each side of the Mississippi river, for hundreds of miles above St. Anthony's Falls. They have eat up all crops here as bare as before sown or planted, which will be calamitous to many of our farmers whose means were exhausted in getting in their spring crops. Large fields of beautiful grain are entirely cut off in a few days. They came last year in season to cut off late crops and lay their eggs, which hatched out in the spring. If they do not leave us before again laying their eggs, we may as well give them full possession another year."

* We are unable to specify the changes in the list of mowers tried the second day, as compared with those mentioned above, which were ready for the test on Tuesday. As will be seen by a comparison of numbers, there were considerable additions, while there were also some withdrawals, either on account of accidents or because exhibitors did not care to venture a further test.

## Inquiries and Answers.

KETTLE FOR COOKING FOOD—What is the cheapest and best instrument to use for boiling food for 40 or 50 hogs? Would not a large kettle do? B. J. T. *Grundy Co., Tenn.* [Mott's Agricultural Furnace, largest size, would be a good thing—or a large kettle, holding two or three barrels, set in brick work, with a space all around between the kettle and brick work, and extending up to the top of the kettle, of about two inches, so that the flame as it ascends from the fire, shall be spread out into a thin sheet in contact with the whole outside, will answer nearly as well.

TICKS.—S. S. C. of Bowling Green, Ky., asks what will kill ticks on his horses and cattle. I suppose he means lice. Rubbing with hogs' lard will kill them, or he can buy unguintum at the druggists: a small quantity put on differents parts of the animal, will immediately kill them, but very little must be used on each animal. A better plan would be to feed his animals better, and give them good shelter in winter, with dry beds, and then they will have no lice on them. It is always unprofitable to keep any stock so that they have lice. JOHN JOHNSTON.

Do you know what is the *Pelican Apple* of the New-York Market? G. M. *Kensington, Ct.* [We do not.

PEA NUTS.—Mr. D. Shear of North Carolina, in a communication to the Patent Office, estimates the crop of Pea or Ground Nuts for 1856 at over 100,000 bushels, valued at $125,000. Their cultivation is summed up as follows: As soon as the frost is out of the ground the land is broken up, and about the middle of April laid off with the plow thirty-three inches each way; two or three peas are then dropped in the crosses thus made. The plants are kept clean with hoes and plows until the vines cover the ground; but no dirt is put on the vines. In October they are dug with a rake or plow. Hogs are then turned into the field, and they soon fatten upon the peas left upon the ground. When the vines are left upon the land for the hogs to feed upon there is no crop that improves the land so much.

LABELS.—I notice a great deal said in Co. Gent. about *labels*. I have been in the habit of using a kind that answers admirably, and costs *almost nothing*. Get strips of *tin*, and with *aqua fortis* (*nitric acid*) and a *glass pen*, you can make a very durable label. J. W. *Henderson, N. C.*

Col. GEO. H. WARING of *Clarksville, Geo.*, inquires for "a thorough-bred 'Morgan' stallion, suitable for stock raising." Owners would perhaps find it to their interest to address Col. W. as above.

"BAKER'S ISLAND GUANO."—*E. J., S. C.* We cannot regard the prospects very good, of Peruvian guano's being cheapened by this discovery. We have received from our obliging Baltimore correspondent, a copy of an analysis of the Baker's Island guano, contributed by the Maryland State Chemist and his assistant, Messrs. Higgins and Bickell, to the daily *Sun* of that city, under date of June 13. It is there represented as being, in "composition and general character, identical with the common Mexican guano of the West Indies," although superior to it in "Bone-Phosphate of Lime," while on the other hand it is considered beyond competition with the Mexican, on account of its far greater distance from us.

WOOL PRODUCING SHEEP.—Please tell me what kind of sheep will turn out the most wool, and of a good quality? W. PRICE. *Priceburg, Pa* [It would perhaps be impossible to decide this question in a few lines without taking a stand somewhere open to objection. In the usual classification of Long, Middle and Fine Wooled sheep, we have a line drawn between the characteristics of the different breeds, of which the Cotswold, South-Down, and Merino, may severally be taken as types. Each has its warm advocates—the first two generally yielding the "most," and the last the highest priced wool, while in England, where the carcass is the main object, the greater weight of the two former classes give them an almost undivided possession of the field. The Merinos support extremes of cold and heat, adapt themselves well to changes of climate, and are satisfied with ordinary attention and coarser food. Crosses between the several breeds have in many cases been made to good advantage.

CHEAP AND DURABLE HAY CAPS.—Somewhere I have heard of "hay caps," or coverings for cocks of hay, while in heaps in process of curing. It strikes me they would be convenient and profitable. Can you inform me where they can be found? D. I. M. [They may be made at little expense, according to a recipe published in an early volume of the Co. GENT., of wide, coarse, cheap, unbleached sheeting, (say 42 inches wide,) cut square. Larger, they would too much exclude the air. A gallon of linseed oil, simmered with 4 lbs. beeswax, and a quart of Japan added after removal from the fire, will spread over 40 caps, and may be applied with a shingle like soft butter. Then sew into each corner a half-pound stone to hold them down, and they are done. No hemming is required, the wax holding the edges.

SPRING RAPE.—I imported some spring rape four years ago, and have raised it every year since. If sowed in April or May it will be ripe about the same time as oats. It makes good oil, which is used to a considerable extent in Germany for cooking, and can also be applied to the same purposes as sweet oil, and for burning in lamps. When used for salad, the oil is boiled and a few onions or raw potatoes cooked with it, which take the strong taste from it. [The above is furnished in answer to an inquiry, by Mr. JOHN MOERSCH, P. M., *Beech Woods, N. Y.*, who offers on the receipt of four postage stamps to send enough to any person for a fair trial.]

BLACK ROT IN APPLES.—Can you inform me through the Cultivator, how I can prevent the black rot in my apples? They generally commence rotting on the trees by the time the fruit is half grown, or before, and continue on until but few get fully ripe; the trees stand on land that I think would be termed clay loam, and cultivated to peas every year, and the trees limed every spring, and look healthy—land not very rich. If you could give the cause, and the remedy, it would much oblige a subscriber, as fruit will be very scarce here this year. O. C. A. *Center, N. C.* [Any information on this subject from correspondents, would be gladly received.]

TRANSPLANTED PEACH TREES DIE.—Can you tell us why so many peach trees transplanted this spring have failed to grow? I heard a very general complaint in relation to them, and thought at first it might be mismanagement at the nurseries; but was told on Saturday by a very careful tree planter, that he went to the nursery, took up the trees and planted them out himself, so there could be no unnecessary exposure; out of 150 he thinks 100 will die. He states that a neighbor procured 400, and a large majority will die. Is it confined to this region? C. S. *Wayne County, June* 22, 1857.

Will some of your correspondents who have had any experience in the matter, please inform me through your paper what is the best time to cut Raspberry bushes on pasture ground. G. B. *Calais, Me.*

BUTTER WORKER.—I have been told that there has been advertised in the Country Gentleman a Butter Worker, that performs very satisfactorily, and very efficiently. Can you or any of your correspondents inform me where it can be had, and if it has any true

merit? Working butter is an operation which requires a machine of some power to press out the milk; and if that promises to be efficient, I would like to have one. A FARMER'S WIFE.

WHAT WILL CURE SWENEY?—I have a fine young mare troubled with Sweney. She is not lame as yet, but her shoulders are much caved in, and I fear are growing worse. I should like if some of your numerous readers would enlighten me as to the proper remedy S. P. F. *Newton, Jasper Co., Iowa.*

UNDERGROUND ICE HOUSE.—Have you or any of your subscribers ever lined an ice house (under ground) with stones instead of plank? If so, please give your success, and your opinion as regards others doing it, through the pages of the Co. GENT. A JERSEY SUBSCRIBER.

"RED DURHAMS."—*C. W. T., Sandusky, O.* The "Short-Horned" or "*Durham*" cattle are called by either name. The word *Red* in the name of the bull you mention, he probably derives from his color.

SICK CALF.—I have a calf six weeks old, which was taken sick a short time ago, and I think it will die. It at first for a day or two appeared to be "dumpish" and dull, and since then has constantly lain down, except when *driven* up, or it gets up to eat, when it trembles so as to be unable to stand but a few minutes at a time. I think it is not the result of a cold, as it has had good shelter and litter to lie on. It has been fed regularly milk and a small quantity, say half a pint, of oil meal each day. I have heard of such instances before, but have found no one to inform me of the nature of the disease, or a cure for it If you or any of your correspondents can do so, you would greatly oblige A SUBSCRIBER. *Enfield Centre, N. Y.*

CELERY.—Please inform me in your answers to inquiries, what is the best manure to put in the bottom of trenches for celery. W. D. MCGUIRE. *Wellsburg.* [Well rotted, rich, stable manure is the best—and if a little hen manure or guano has been added to it a week or two previously, it will give it additional strength—try both ways and report the results.

PEOPLES' JOURNAL—*W. P., Penn.* This was discontinued some time ago—the proprietor, A. E. Beach, being now one of the publishers of the *Scientific American*, a specimen copy of which paper you could probably obtain by addressing Munn & Co., Editors, 128 Fulton-st., New-York.

GAPES IN YOUNG TURKEYS.—Do you or any of your subscribers know the cause of these little worms in young turkeys' wind pipes, which prove a fatal disease, called the gapes, and is there a prevention? GREENWICH.

What information can you give relative to the culture of Cranberries on upland, sandy soil? How, or where are the plants obtained—where should they be set—at what distance apart, &c.? P. W. H. *Hydeville, Vt.*

THOMAS' FARM IMPLEMENTS.—*B. J. T., Tenn.* We can send you this postpaid, on receipt of one dollar.

ELDER BUSHES.—Can you inform me how to destroy elders? I have tried different modes, and been successful only in uprooting them, which is a tedious task. G. B. *Leyden, N. Y.* [Elders are hard to subdue, but Elliot, in his Essay on Field Husbandry, says that he knows from experience, that mowing them five times in a summer will kill them.]

WORK ON FARMING.—Please inform me where I can get the best work on Practical Farming, and what it will cost, and oblige. N. G. [Allen's American Farm Book, price $1, or $.25 by mail, is a good work. For a larger and more general work we would recommend the Farmer's and Planter's Encyclopedia, price $4, or $4.50 by mail.]

ETHAN ALLEN—It seems a mistake was made by a correspondent of this paper, in relation to the Black Horse "Ethan Allen," which is owned by Holcomb & Roe, and kept at the stable of O. S. ROE in Shoreham, Vt.

BLINDS FOR HORSES.—I noticed in the June number of THE CULTIVATOR, an article from A. B., Jr., headed "Blinds for Horses." "Perhaps the writer is an experienced horseman;" but it is clear to me that a horse can see better with his eyes open than with them shut. Every one knows, who has ever driven horses, that they invariably turn their heads at every unusual noise behind them. The only remedy is to drive without blinds so that the horse may see what is behind him. If A. B. will hang a side of harness leather in front of his eyes, he will find it difficult for him to see; but if he will take the *blinds* off of himself, he will take them from his horse, and then both will see better. S. *Jeff. Co., Ind.*

SECKEL PEAR—We have a choice Seckel Pear, some ten years old, *standing near an elm*, which we have taken extra care of and makes wood rapidly, that the two past seasons has bloomed fully but *no fruit.* Now, please, what is the cause and the remedy? Has its contiguity to the elm anything to do with it? W. J. PETTEE. *Salisbury, Conn.* [We know of no influence the elm could exert to prevent fruitfulness—but could answer the question more understandingly if we knew the size, distance, and position of each.]

CURE FOR SWEENY.—I have a valuable horse lame in the shoulder, and suppose the cause to be the sweeny. The remedy recently published in your valuable paper, seemed to be a secret compound of stimulating or irritating oils. If you could give some information what those oils are composed of, you would do me a favor. N. HANSON. *Aurora, Cayuga Co., N. Y.* [Will "W. T. L.," who furnished the remedy referred to, enlighten our correspondent?]

TOP ONIONS.—A subscriber inquires in your issue of 2d instant, "if top onions set out this spring will, if preserved over until next season, produce top onions again." I have now growing three year old bulbs with very large, strong stalks, and crowned with a splendid crop of top onions, though of course yet green. They probably can be continued for any number of years, as the bulb is yearly renewed. Another fact in regard to top onions—a fine crop may be raised, (I mean of seed or tops,) the first season they are set. Select the *largest* seed or onions that grow on the top this season, and set them early next spring in good soil well manured, and almost every onion will throw up a strong stalk-bearing top. I have two or three square rods set with last year's tops, and with hardly an exception the stalks are crowned with fine bunches of top onions. S. STERLING. *Bridgeport, Ct.*

### Washing Fluid.

EDS. CULTIVATOR—In answer to an inquiry in the June No. of your paper, why Washing Fluid containing spirits of turpentine should not be used? permit me repectfully to answer: it is very injurious to the health of the persons using it. Its tendency is to relax and weaken the joints of the hands and arms, and more or less to affect injuriously the whole system. I have known various cases where it has caused the finger joints to swell, and be very painful after using it; and in one case, the finger joints would slip out, and it so affected the system that the urine of the patient was so saturated with it as to cause a strong smell of spirits of turpentine. True, it may not affect all persons using it alike injuriously, but it is a very unsafe preparation to be used in the way of washing. E. MAXSON. *Otsego Co.*

## Notes about the West—II.

THE FACILITIES OF FARMING ON THE PRAIRIES.

One object to which we particularly devoted our attention, during our recent tour to the West, was its advantages and disadvantages for farming purposes as compared with the Central and Eastern States. To enable us to form an intelligent opinion on this point, while making our head-quarters at Rock Island on the Mississippi, we took several trips into the interior, up and down on both sides of the Mississippi. One of the most interesting of these, was a tour of about seventy-five miles, extending through the south part of Rock Island county, and into the north part of Mercer, in Illinois.

With a smart pair of poney horses and a light buggy wagon, we started from Rock Island—formerly the head-quarters of the famous Indian chieftain Black Hawk, and the seat of an Indian town containing a population of about 10,000 genuine "natives," but now a flourishing young city of eight to ten thousand people, comprising, as most of the new towns of the West do, representatives from all quarters of the Union and most of the nations of Europe. Crossing the Rock river, which empties itself into the Mississippi about three miles south of Rock Island city, and passing through the village of Camden, we soon drove over the valley, and entered upon our travels on the Prairies. In leaving the river valley, we rose on to a wooded ridge extending for three miles or more, before we came on to the beautiful rolling prairies comprising the southern towns of Rock Island county. We drove about sixty miles over these prairies, following "the main travelled road," which, instead of being a surveyed and located road, leads where the convenience of the settlers prompts—turning this way to avoid a "slough," or square about to the right or left, to pass around the newly erected fence of some recent settler, for when a new-comer buys a quarter-section, more or less, he pays no regard to the roads crossing it, but cuts them off just as suits his convenience in fencing. The consequence is, as the lots fenced in usually consist of forty, eighty or one hundred and sixty acres, the traveller is often put to no little inconvenience in getting around these large lots, and again finding his way into "the main travelled road."

The weather was comfortably cool, and the roads all that could be desired—the rich prairie soil forming a hard carriage road over which it was a delight to drive a good team. As we were in pursuit of information, we made it a point to have a social chat with nearly all the farmers who chanced to be in sight as we passed their farms. We were everywhere cordially received, and our numerous questions promptly and cheerfully answered. We are, however, under particular obligations to DANIEL DEGRAFF of Buffalo Prairie, CLINTON G. TAYLOR of Pleasant Ridge, and JOHN EDGINTON of Edginton, for the freedom with which they imparted the details of their own operations and their views of the prairie region as a farming country.

The first and most striking advantage which the new settler on the Prairies, possesses over one who selects a home in a wooded country, is found in the facility and economy with which his land—not a portion, but the whole of it if a good selection has been made, may be brought into profitable culture. Instead of spending years of toil, as the fathers in the Atlantic States had to do, in chopping, logging, burning and clearing up and fitting their land for the plow, the Prairie farmer finds spread out before him a virgin soil of almost unsurpassed richness, all ready for the plow, and without an obstacle to obstruct its progress perhaps, until it shall have passed over the whole extent of the farm, every foot of which, with sufficient force, may if desirable, the second season be got into wheat.

The first thing to be done on entering upon a new Prairie farm, is to provide some sort of a home for the family. For this purpose the necessary lumber must be procured usually at some distance, and be carted from the rail road or river. A well also must be dug, and posts and boards provided for fencing as much as is to be got into sod corn the first season. A comfortable house, one and a half story high, with five rooms, can be built for about $450—a well will cost not far from $30, and a post and board fence say $1.00 to $1.25 per rod.

BREAKING THE SOD.—The first of May is the best time to commence this operation. It is usually done by the job, the price being uniformly, so far as we heard, $3 per acre. Teams of four to six yoke of oxen are usually employed for this purpose, with a heavy breaking plow which turns a furrow two to three inches in depth by twenty-four inches in width.* The usual day's work with this plow and team, is two acres, or twelve acres per week. This appeared to us very slow work and a great waste of team. We felt confident from the little practice we obtained by following several of these plows, that three good yoke of cattle would have accomplished the same amount of labor with ease, but it is the custom to have five or six yoke, and the plowmen are ambitious to have the larger number, and seem to think they cannot get along with less. We were, however, confirmed in our opinion when we visited the farm of CLINTON G. TAYLOR, Esq., Pleasant Ridge, where we found his son, only seventeen years old, breaking the sod with a single pair of horses, and a light but admirably made plow, which cut a furrow of twelve inches. With this plow and team, Mr. T. informed us that his son broke nine acres in a week, without difficulty. This breaking up should, we were informed, be done while the grass is in vigorous growth, as at that time it will all be killed, while if broken up after the grass has ceased to grow in hot weather, much of it will start up again, to the serious detriment of the future cultivation of the field. Hence May and June are considered the two best months for sod-breaking.

SOD PLANTING.—Indian corn is planted on the newly broken sod. This is usually done by making a hole in the sod with an ax or sharp hoe, and covering with the heel of the boot. We were told, however, that the corn is sometimes strewn on the grass, and covered by the plow turning it under the sod, and we saw a field being planted in this manner. It is said the corn finds no difficulty in making its way up through the sod, when placed fairly under it, but if it falls near the edge it will find its way out between the furrows and amount to nothing. This planting may be continued as late as the 25th of June, and if the season is favorable it will be matured. This first crop receives no culture, and produces from ten to twenty-five bushels per acre.

SECOND YEAR.—If intended for Indian corn, the land broken up the previous year, is replowed to the depth of four or five inches, and the seed planted generally with machines. We saw one in operation, invented by Geo. W. Brown of Galesburg, Ill., drawn by a pair of horses, with two men on it—one to drive and the other to tend the machine, which planted two rows at a time, and with which it is said 15 to 20 acres were planted per day. When the corn is well up, the ground is harrowed, the teeth passing directly over the hills being taken out. The only after culture it receives is from the plow or cultivator, one of which is usually run three times through the rows. Good farmers expect in

*One of the prettiest sights we saw on the prairies, consisted of six teams of five yoke each, attached to three big wheel plows, and following each other through furrows of just a mile in length, the whole turning over a breadth of twelve feet at each bout or passage across the lot.

favorable seasons, from 60 to 75 bushels per acre. Mr. JOHN EDGINTON, who had 180 acres in corn, informed us that he had grown it in very favorable seasons, at an expense of five cents per bushel, but that he considered ten cents per bushel as a fair average cost of culture.

When the ground is to be sown with spring wheat, barley or oats, it is not plowed in the spring, but the seed is sown on the corn stubble or fall plowed land, and either harrowed or plowed in with a double shovel plow. Average product estimated at 20 bushels spring wheat, and 50 bushels oats per acre.

Thus it will be seen that the farmer may receive a crop of sod corn the first year, and a crop of wheat, barley or oats the second, from as large a portion of his land as his force will enable him to bring under the plow, at an expense of one plowing and a thorough harrowing only. His land, thus easily and cheaply brought into cultivation, is now ready for any crop which it will grow. The soil being very loose, the labor required for its future culture is much less than on harder and more compact soils, while its freedom from stumps and stones enables him to avail himself of all the varieties of machinery used in farming, such as planters, drills, reapers, mowers, &c. With these advantages, we were not surprised at the desire almost everywhere manifested for large farms and large fields, the fenced lots seldom enclosing less than forty, frequently eighty, and sometimes one hundred and sixty acres. And we confess that these large fields of wheat and corn possessed a magnificence and beauty for our eye, such as we had never before witnessed, though without the charm of shady grove or purling stream. The wonder was that with such a vast extent of prairie inviting the culture of man, we should have found most of the products of the soil at nearly famine prices—corn at 65 to 75 cents—potatoes at $1.50 to $2 00 per bushel—butter, at 25 to 30 cts. and cheese at 12 to 15 cts. per lb.—hay at $30 to $40 per ton. But these prices were extraordinary, and must, by the rapidly increasing extent of land being now every year brought under cultivation, soon be very greatly reduced—so much so we doubt not as to reduce the profits of farming to a comparatively low ebb; but we do not apprehend, as some seem to do, that the time will soon arrive when wheat and corn and beef and pork will be a drug in the market. [We shall resume this subject hereafter.]

## Crops, &c., in Western New-York.

On the way to Syracuse early last week, we saw little corn much more than a foot above the ground. Through that section of the state embracing Onondaga, Cayuga and Seneca counties—so far as we could learn, a considerable portion of the corn crop must be an entire failure—how large a part may be secured in the end, will depend upon the weather we have from this time forward, and the holding off of the fall frosts. The wheat would be an excellent yield, but for the weevil, and serious fears are entertained for the results of its depredations, which have already been quite severe. The crop is unusually late, owing to its backward start from the unfavorable weather last autumn, and is thus more exposed than ever to the provoking ravages of this rascally insect. We shall hereafter refer to the magnificent fields of wheat on some farms in the vicinity of Geneva. Oats and barley on all soils not too wet, are promising very finely, at least in Seneca Co. The warm weather last week, has done not a little in bringing them forward, and has also been of great use to corn, although the majority of fields devoted to the latter have a yellow hue and stunted, uneven growth. Our friend JOHN JOHNSTON'S cornfield is far more advanced, more even, and of better promise, than any we saw elsewhere, and perhaps not quite equalled on the best farms in his own vicinity. The hay crop is certainly a good, if not a very superior one—the fields which were mowing at Messrs. Johnston's, Swan's and Foster's, near Geneva—mainly of Timothy—were exceedingly fine. We believe the yield of clover was not generally quite as good in proportion as that of other hay. The mowing had been going on for some days at the time of our visiting Geneva, but wheat would not be ready before next week.

It is proper to add that we are indebted to Mr. JOHNSTON, during the single day spent at his place, for the opportunity of seeing some of the best farming in his neighborhood, (in addition to his own,) our notes in relation to which are necessarily deferred until a future issue. We had a very pleasant call with him at

WHITE SPRINGS FARM—the residence of JAMES O. SHELDON, Esq. It comprises three hundred acres, and there is no better land perhaps in western New-York, its great need at present being drainage. Springs of excellent water rise in great abundance all over it—indeed, digging to the depth of a few feet at almost any point throughout the whole, will strike running water. The village of Geneva, at a distance of a mile and a half, obtains its supply from one of the springs, and others furnish power enough to carry one or two mills on the place. The grounds about the house are very tastefully laid out, the garden beautifully arranged, and the lawn in front ornamented by a natural grove as finely disposed as could have been designed by the most skillful hand and artistic eye. There are large and valuable beds of marl, which Mr. S. proposes to use as a fertilizer. We examined with much pleasure

MR. SHELDON'S SHORT-HORNS AND ALDERNEYS.—Of the former he has several beautiful cows, one imported, "Delia," bred by Mr. Tanqueray, and sired by "Duke of Gloster;" "Grace" and "Josephine," sired by "Marquis of Carrabas," and a heifer calf from the latter sired by "Duke of Oxford;" "Chatelaine," by "Balco," and "Christabel," by "Young Balco,"—also a young bull calf, out of Mr. Thorne's "Peri," by "Grand Duke." They form as select a lot as could be desired by the most fastidious, and we understand their owner intends to take an early opportunity of securing a first class bull by which to maintain the excellence of his herd, and aid in improving the stock of his neighbors. The Alderneys include a bull, four cows and two young heifers—the first and several of the females being of Mr. Sheldon's own importation, and all very choice and valuable animals. We should not close without mentioning

A BEAUTIFUL VIEW—which may be had from the neat rustic summer house in Mr. Sheldon's garden, and which embraces a wide extent of fine country, while in the distance the villages of Waterloo and Seneca Falls, and in a clear atmosphere, even the city of Auburn, are quite distinctly seen. Although the place has only been in its present proprietorship for the past five or six months, many repairs and improvements have already been entered upon, and its natural capabilities are such as to render it susceptible of being made one of the most productive as well as highly ornamental estates within our knowledge. It may be already known to some of our readers as for many years the residence of Gideon Lee, during whose life time it was brought to a high state of improvement, and large and commodious buildings erected. Neither the land nor buildings have been very well kept up since his death.

# Notes for the Month.

BILLINGS' CORN-PLANTER.—We have made a trial of this machine by planting about 15 acres with it, the whole inverted sod, moderately harrowed. I has performed the work well. The field thus planted is remarked as the *most even* in the neighborhood. It will drop in hills of any desired size, by varying the hole in the slide; and the distance of the hills apart in the row may be 11 inches, 22 inches, or 44 inches. We adopted the medium distance of 22 inches. It is drawn by a horse, and deposits a row of hills as fast as the horse will walk, and is easily made at the same time to drop a spoonful, more or less, of plaster, ashes, or any other pulverized manure, in each hill, all at the same operation. No planting machine worked by a horse can be made to deposit hills *in rows both ways*, but we prefer drills or rows of thick hills, to any other mode, as, according to careful and measured experiments which we have made, about one-third more corn will grow on a field planted by the latter mode,* than by placing the hills so as to be cultivated in both directions, while on clean, well farmed land, there is but little difference in the labor of tillage.

FINE STRAWBERRIES—WILSON'S ALBANY AHEAD.—Mr. J. M. NORTHROP, last August, set out in a door-yard in this city, 50 plants of Wilson's Albany strawberry and 25 of Hovey's Seedling—the whole occupying a space less than 10 feet square. The latter of the two sorts had somewhat the best position; both were treated alike, neither receiving any extra cultivation or particular care. Up to June 29, this little patch had averaged over a quart a day for a week. Comparisons between the two varieties were all very much in favor of Wilson's. As regards productiveness, up to July 2d it had yielded many times the quantity of Hovey's, and promised to continue in bearing several weeks, while the latter was already out of fruit. It has excelled in size, and every body prefers its flavor. Among the berries, Mr. N. has gathered a number full four inches in circumference, and of 4 which ripened at the same time on one stalk, one measured more than 4 and the others all more than 3¼ inches. The average size throughout is large; the flesh firm, although juicy, excellently qualifying it to bear transportation.

All who have tried this as yet comparatively little known variety, unite in speaking well of it. No pains have been taken to attract attention to it, and on this account we the more cheerfully publish such voluntary evidences of its excellence as the above. Not only will no collection hereafter be considered complete without it, but we shall be much mistaken if it does not at an early day displace many of the popular favorites.

REAPING MACHINES—HOME AND FOREIGN FERTILIZERS—In an article on the more recent improvements in Agriculture the Farmer's Magazine wonders that "the American reaping machine," the very worst work it ever saw performed by which, "left far less raking than the best mowing," has made so little progress among English farmers. "Oh! but then the Royal Agricultural Society have decided that it has not yet been brought to perfection!"

—The same article expresses surprise at a point upon which a home lesson may be learnt by American farmers. Guano is a "pet;" such undue importance is attached to it that it would scarcely be surprising "if some were to relinquish farming altogether, if the supply of guano were exhausted or rendered unattainable." *At the same time the manures which exist in the sewage of towns, liquid manures,*—and how many other materials of the greatest richness and value as fertilizers, may we not add for the mass of farmers in this country?—*are either entirely*, or very generally, *neglected!* Will some accomplished arithmetician please "figure up" the *economy* of these modes of farming, and lay the results before our readers?

MR. WAINWRIGHT'S SALE.—The following is the result of the Devon sale at "The Meadows," June 17th:

| | | |
|---|---|---|
| 1. | Joseph Hilton, New-Scotland, Nonpareille, | $125 |
| 2. | do. " Moss Rose, | 110 |
| 3. | do. " Volga, | 125 |
| 4. | D. Griffin, Clinton, Zella, | 140 |
| 5. | " " Sacsusa, | 135 |
| 6. | E. Cornell, Ithaca, Yuba, | 100 |
| 7. | M. Vassar, Poughkeepsie, Minnesota, | 155 |
| 8. | " " Alma, | 135 |
| 9. | " " Weigela, | 140 |
| 10. | J. W. Hamlin, Erie Co., Dora, | 140 |
| 11. | " " Rowena, | 145 |
| 12. | S. Howard, Boston, Mass., May-Boy, | 300 |
| 13. | M. J. Faison, North Carolina, Hoobamok, | 115 |
| 14. | M. Vassar, Poughkeepsie, Kwasind, | 105 |
| 15. | (Not sold.) Narraganset. | |
| 16. | Hon. John Wentworth, Chicago, Ill., Chibiabos, | 185 |
| 17. | (Not sold.) Arkansas. | |
| 18. | M. J. Faison, North Carolina, Taminund, | 100 |
| 19. | (Not sold.) Potomac. | |
| 20. | (Not sold.) Naugatuck. | |
| 21. | M. J. Faison, North Carolina, Kennebeck, | 100 |
| | Total for 17 head, | $2,355 |
| | Average, | $138.50 |

☞ We have received a very handsome lithographed engraving of a vase of "California Fruit, printed for the Agricultural Exhibition, from specimens raised by THOS. M LOGAN, M. D, at Smith's Gardens, near Sacramento." The samples comprise "Crawford's Late Peach, circumference 12 inches, weight nearly 12 oz.; Smith's California Seedling Strawberry, largest diameter two and one-fifth, and the shortest, one and one-quarter inches; Black Hamburg Grapes, average diameter eight-tenths inches, and Cannon Hall Muscat do., average diameter nine-tenths inches."

EVAN'S ROTARY DIGGER.—A trial of this implement, a cut of which recently appeared in our columns, took place June 20th, attended by several members of the Philadelphia Ag. Society, on the place of Mr. J. C. Vogdes, near that city. The ground is said to have been very heavy and wet, notwithstanding which "the trial seemed to give great satisfaction to those present."

SHORT-HORNS AS MILKERS.—Mr. Thomas Willlis o Ireland, in a communication to the Irish Farmer's Gazette, says: "It is frequently said in derogation of Short-Horned cattle, that they are very deficient in milking properties. In proof that such a charge is unfounded, I send you an account of the produce of my cow "Eleanor," Herd Book, vol. x, page 345:

In 1851, when 3 years old, from one week's cream, 18 lbs. butter, (16 oz. to the lb.)

In 1855, when 7 year's old, from one week's cream, 21 lbs. 4 oz.

In 1857, when 9 year's old, from one week's cream, 24 lbs 8 oz.

In the same year, the second week after calving, 24 lbs. 8zo.

"TERRA-CULTURE."—Mr. O. S. MURRAY, of Warren Co., Ohio, issued under date of 25th May, a circular headed as above, to which we have intended to refer for several weeks. It is not too severe upon the pretensions of "discoverer" Comstock, who has been afflicted many years with an idea of the importance of his "revelations," only worthy of notice as honest men become its dupes. It seems that he has offered large rewards to any one who will show that he is not a "great discoverer," or bring forward any improvement upon, or prove any error in, his so called Terra-Culture. Mr. Murray claims the rewards on all three points, but as the offers are as thoroughly sham as the "discovery," it will probably be some time before he secures the $1,200.

The facts are probably pretty much as summed up by Mr. Murray; Comstock recommends some things

always known to be good, and more or less practiced every where; he mingles them through a tedious "disclosure" of half-a-dozen or more mortal hours, by which means he generally convinces his hearers, 1., that he has said a *great deal*, and 2., that there *may be something* in it; and with all his pretended knowledge of his subject, he fails to eschew much that is absolutely useless, and not a little that is really hurtful. We are beginning to be very shy of "Professors;" it seems to be a habit they are getting of late to claim the originating and proprietorship of all good and of all advancement, while they are by no means above disposing of the same by the lecture, by the ton, or by any other convenient measurement or name, known or unknown either in arithmetic or practice. The grand secret of universal fertility, whether "disclosed" through the country on a two-dollar *per capita* arrangement, or bagged and branded from a chemical manufactory, is something of which in these days, one has to be a little suspicious.

ALBANY COUNTY AG. SOCIETY.—The Prize List of this Society for its next Fair—to be held at Washington Parade Ground in this city, Sept. 15–17, has been issued, and copies may be procured of the Secretary, A. F. CHATFIELD, 414 Broadway.

ADDRESS AT BUFFALO.—We learn that Hon. EDWARD EVERETT will deliver the address before the N. Y. State Agricultural Society at their show this fall. This eloquent orator, whose productions always give evidence of careful polish and considerable thought, can but attract many eager listeners, and will delight if he does not instruct all who are present.

CHESS.—We have another letter from "Enquirer," whose previous article on the transmutation of wheat to chess was noticed at page 400 of last vol. of Country Gent., in which he describes a head of wheat and chess which he found in 1834, and which he thinks proves conclusively that wheat will turn to chess. We have seen many such heads, with wheat and chess *apparently* growing together, and have several times within the last twenty years explained the phenomenon, and shown that the chess had no natural connection with the wheat, but grew on a stalk of its own. In THE CULTIVATOR for 1851, p. 53, a full explanation, with an engraving, will be found, which we think will show our correspondent how his head of wheat and chess became united; and we can assure him that, though many persons have supposed that they possessed or had seen the proof that wheat would turn to chess, yet no such proof has ever been presented, which would bear the scrutiny of a careful examination.

DEVON CATTLE AND SOUTH DOWN SHEEP.—It will be seen by an advertisement in this paper, that L. F. ALLEN, Esq., proposes to offer at public sale on the 9th of September, his entire herd of Devon Cattle and flock of South Down Sheep—the sale to take place at his farm on Grand Island.

CANADA AG. EXHIBITION.—The coming exhibition of the Provincial Ag. Association of Canada West, is to be held at Brantford, Sept 29 to Oct. 2 –the week previous to the New-York State Show at Buffalo. There is a liberal list of prizes for domestic animals and agricultural implements from the States.

WESTERN VIRGINIA AG. SOCIETY.—We have received the annual Prize List of this Society, whose head quarters are at Wheeling. It embraces particularly the western counties of Virginia, and the counties of Ohio on their borders; but its premiums are open to all who choose to compete for them. Its Fair is to be held at Wheeling Island, Sept. 16–18.

☞ The Clarke Co. (Ky.) Ag. Society, organized last month, holds its first show Aug. 19–21—W. R. DUNCAN, President.

WILSON'S ALBANY STRAWBERRY. — At a recent meeting of the New-York Farmer's Club, Mr. PARDEE, author of a well-known treatise on the culture of this fruit, mentioned his having had a single plant of Wilson's Albany, which produced no less than *one hundred and eighty berries*. A. P. CUMINGS, Esq., Editor of the *N. Y. Observer*, in the last number of that paper, speaks of the exhibition before the New-York Horticultural Society last year, of a single plant from his garden, less than one year old, and bearing on five foot stalks the immense number of *two hundred and sixty berries, green and ripe!*

Mr. Cumings also speaks of "Hooker's Seedling" as "of the highest and most exquisite flavor, of very large size and great productiveness only second to Wilson's seedling."

☞ We have received the prize list of the United States Ag. Society's Show at Louisville, Ky, Sept. 1–5, 1857. It is said to amount to $12,000, and can scarcely fail to elicit animated competition.

GOOD SAMPLES OF MERINO WOOL.—Enclosed I send you two samples of wool from my two-year-old buck; he was sheared close and clean on the 8th day of last June, and again on the 18th this June. His fleece weighed 17 1-4 lbs.; carcass 117 lbs. You will perceive that his wool is pretty free from black tarry gum, remarkably long and compact. I have a yearling whose wool is of a finer quality; his fleece weighed 13 1-2 lbs.; carcass 94 lbs. A small sample from a ewe that has a buck lamb by her side—fleece was 10 lbs. and some ozs., even, all clean and nice. They are descendants from Col. Humphrey's importation of Spanish Merinos. If I recollect rightly, he imported them in 1809 or 1810. The two-year-old took the second premium in the sweepstake class, at our third annual sheep show held at Penn Yan in May last. He was bred by T. Stickney of Vermont, who has bred some of the most celebrated bucks of that State, among which was Jewett's brag buck 'Fortune,' Bingham's 'Vermont Hero,' and many more noted sheep. O. F. MARSHAL. *Wheeler.* [Our correspondent's letter of May 6 was duly received.]

☞ We see it stated that some of the breeders of fine stock in Bourbon county, Ky., have been discussing among themselves, the propriety of organizing a permanent company, for the public sale, annually, of breeding stock of every description. A public meeting was called for last Friday, for the discussion of the subject, the result of which we have not yet heard.

DEPTH OF PLOWING.—It requires but a moment's reflection to perceive that there is a propriety in making the depth of one's plowing, correspond in some degree to the nature and habits of the crop designed for the land. This matter, however, has received but little attention either theoretically or in practice. One of the best farmers in Rhode Island plows to the following depths for the several crops named: For corn and potatoes, 8 inches; for rye, 4 to 5 inches; and for onions, beets, carrots, &c., 12 inches.

STEAM FOR FARM USE.—If I had time I would like to answer A. C. W, on Steam *vs.* Horse Power, page 395, last vol. Co. Gent. I will just say I have used an Engine several years, for sawing, churning, threshing, cutting feed, &c., with perfect safety and economy, and prefer it to any other motive power, especially for churning for a large dairy G. A. HANCHETT. *West Stockholm, N. Y.*

BANKING UP SUCCESSFUL AGAINST MICE.—I tried heaping up a small mound of earth around my fruit trees, last winter, to protect them from the mice, and with perfect success. Of about three hundred pear trees thus guarded, not one was injured by the little depredators; while two or three not protected were badly gnawed. I found also that Queen of the Bourbons and Souvenier de la Malmaison were perfectly protected by a slight covering of earth. F. RANDALL.

VALUE OF CLOVER HAY.—H. CAPRON, of Illinois, who has been largely concerned in the dairy business, (having sold $6,000 worth of milk in a single year,) informs us that he made accurate experiments to test the comparative value of timothy and clover hay. These experiments extended through a period of two years, were accompanied with accurate weighing and measuring, and the food was changed from timothy to clover, and vice versa, once a month, and results were that the clover hay uniformly yielded ten per cent. more milk than the timothy. It will be observed that this was not a single experiment, but a *series* of experiments extending for a long period. It is also proper to state that the clover was well cured.

FARMING ON SHARES. — A correspondent who has sought in vain for full and detailed information on the "system of share farming," suggests the propriety of offering a prize of $50 for the best essay on the subject, which is one of much importance both to the landholder and the farmer. Information is wanted as to the rules which govern in such cases in different parts of the country, in relation to the different branches of farming, stock growing, dairying, market gardening, &c., the amount of capital to be furnished by each party, the division of the products or profits, and the rights and privileges to be enjoyed by the parties. The prize proposed, and to which our corrospondent would contribute $10, might induce some one to collect and arrange the desired information. In the mean time we shall be glad to receive from our readers any facts they may be able to furnish on the subject.

CRANBERRIES.—C P. WOOD, Esq., of Auburn, planted nearly half an acre of cranberries the past spring, the vines being procured of D. L. HALSEY, Esq., of Victory, N. Y. When we saw them recently they were growing finely, and afforded promise of favorable results. We shall be glad to hear that his expectations in regard to their productiveness are fully realized.

CATALOGUE OF SHORT-HORNS.—Messrs. JOHN and ALBERT ALLEN of Lexington, Ky., have just issued a "Catalogue of Improved Durham Cattle," belonging to them, comprising forty-one females and thirteen males.

## Farm for Sale.

THE subscriber offers for sale his farm in Fairfax Co., Va., 6 miles north of the Court House, and about 20 miles from Alexandria and Washington respectively, and 2 miles from the Mannasses Gap and Alexandria R. R. Station, and 3 miles from Alexandria, London and Hampshire Railroad Station, both roads being now in course of construction.

The farm contains 321 acres of land, about half of which is cleared and under a good state of cultivation; the balance is in timber. There is supposed to be 200,000 feet of good saw timber on the land. There is two steam saw-mills, lately put up, in the neighborhood; one near one side of the land—the other is about half a mile from the other side. The land can be divided into three farms; there are three dwelling-houses on it, all nearly new. There is a large orchard of apples of choice improved fruit, now bearing; also peaches, plums and cherries. The land is well watered by never-failing springs that run together, and afford plenty of water to drive a wheel of capacity enough to saw wood or thresh. A large portion of the land is alluvial bottom, a portion of which is cleared and ditched.

There is also a stone quarry on the land. To one seeking Virginia land, this presents many inducements, and will be sold low, and on reasonable terms of payment.

Any one wishing further particulars respecting the land, may address me at Chantilly, Fairfax Co., Va.

July 16—w1tm2t. BENJ. R. BARLOW.

## ESSEX PIGS.

THE Subscriber is now ready to receive orders for pigs of this breed from his Spring litters. Three of these were sired by his imported boar "Brum," selected as the best pig in the pen of five to which the first premium was awarded at the Birmingham (Eng.) Show in Dec., 1856; and two by Mr. Thorne's imported boar "Chelmsford," winner of the first prize at the last Show of the Royal Ag. Society.

Selections will be made in strict accordance with the order of application. Where pairs are sent they will be taken from litters sired by different boars.

Price at six weeks old, $25 per pair; single pigs, $15; well boxed and shipped at Rhinebeck. TERMS CASH.

C. S. WAINWRIGHT,
The Meadows,
June 25—w4t—maug&sept. Near Rhinebeck, N. Y.

## ALBANY TILE WORKS.

*Corner of Patroon and Knox Streets, Albany, N. Y.*

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions, warranted superior to any made in this country, hard burned. On orders for 10,000 or more, a small discount will be made.

HORSE-SHOE TILE CUT 14 INCHES LONG—PIECES.

| | | | |
|---|---|---|---|
| 2½ inches rise, | | $12 | per 1000 |
| 3½ | " " | 15 | " |
| 4½ | " " | 18 | " |
| 5½ | " " | 40 | " |
| 6½ | " " | 60 | " |
| 8 | " " | 80 | " |

SOLE TILE CUT 14 INCHES LONG—PIECES.

| | | | |
|---|---|---|---|
| 2 inches rise, | | $12 | per 1000 |
| 3 | " " | 18 | " |
| 4 | " " | 40 | " |
| 5 | " " | 60 | " |
| 6 | " " | 80 | " |

Also on hand 6-inch calibre Octagon pipe, $20 per 100, and 8-inch calibre Round pipe, $30 per 100, for large drains —Cornice Brick, of the pattern used in the City of Washington, also on hand.

Orders respectfully solicited. Cartage free.

C. & W. M'CAMMON,
(Late BABCOCK & VAN VECHTEN,)
Albany, N. Y.
RICHD. H. PEASE, Agent,
Excelsior Ag. Works, Warehouse and Seed Store,
March 1—w&mtf 359 & 371 Broadway, Albany, N. Y

## Agricultural Books,

For sale at the office of the Country Gentleman.

## First Class Family Journals.

LIFE ILLUSTRATED: A First Class Pictorial Paper, weekly. $2 a year; $1 for half a year....WATER-CURE JOURNAL: Devoted to the Laws of Life and Health. $1 a year....PHRENOLOGICAL JOURNAL: Devoted to the Improvement of Mankind. $1 a year. The three Journals sent one year for $3. Address

FOWLER & WELLS,
July 9—w4tm2t. No. 308 Broadway, New-York.

## Choice Farm Lands for Sale.

THE ILLINOIS CENTRAL R. R. COMPANY,

IS NOW PREPARED TO SELL ABOUT

1,500,000 ACRES

OF CHOICE FARMING LANDS,

In Tracts of 40 Acres and upwards, on Long Credits and at Low Rates of Interest.

THESE Lands were granted by the Government to aid in the construction of this Road, and are among the richest and most fertile in the world. They extend from north-east and north-west, through the middle of the State, to the extreme south, and include every variety of climate and productions found between those parallels of latitude. The northern portion is chiefly prairie, interspersed with fine groves, and in the middle and southern sections timber predominates, alternating with beautiful prairies and openings.

The climate is more healthy, mild and equable, than any other part of the country—the air is pure and bracing, while living streams and springs of excellent water abound.

Bituminous Coal is extensively mined, and supplies a cheap and desirable fuel, being furnished at many points at $2 to $4 per ton—and wood can be had at the same rate per cord.

Building Stone of excellent quality also abounds, which can be procured for little more than the expense of transportation.

The great fertility of these lands, which are a black rich mould from two to five feet deep, and gently rolling,—their contiguity to this Road, by which every facility is furnished for travel and transportation, to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found; and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world —and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked, than those more remote at government rates,—as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer, in the reduced price he receives for his grain, &c.

The Title is perfect—and when the final payments are made, Deeds are executed by the Trustees appointed by the State, and in whom the title is vested, to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

*The Prices are from* $6 *to* $30—*Interest only* 3 *pr. ct.*

**Twenty per cent. will be deducted from the Credit Price for Cash.**

Those who purchase on long credit, give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation, at the end of that time.

Competent Surveyors will accompany those who wish to examine these Lands, free of charge, and aid them in making selections.

The lands remaining unsold are as rich and valuable as those which have been disposed of.

### SECTIONAL MAPS

Will be sent to any one who will enclose fifty cents in Postage Stamps, and Books or Pamphlets, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the Railroad Lands, throughout the State—also the cost of fencing, price of cattle, expense of harvesting, threshing, etc.,—or any other information—will be cheerfully given on application, either personally or by letter, in English, French or German, addressed to

JOHN WILSON,
Land Commissioner of the Ill. Central R. R. Co.
Office in Illinois Central Railroad Depot, Chicago Ill.
April 9—w&m6m

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